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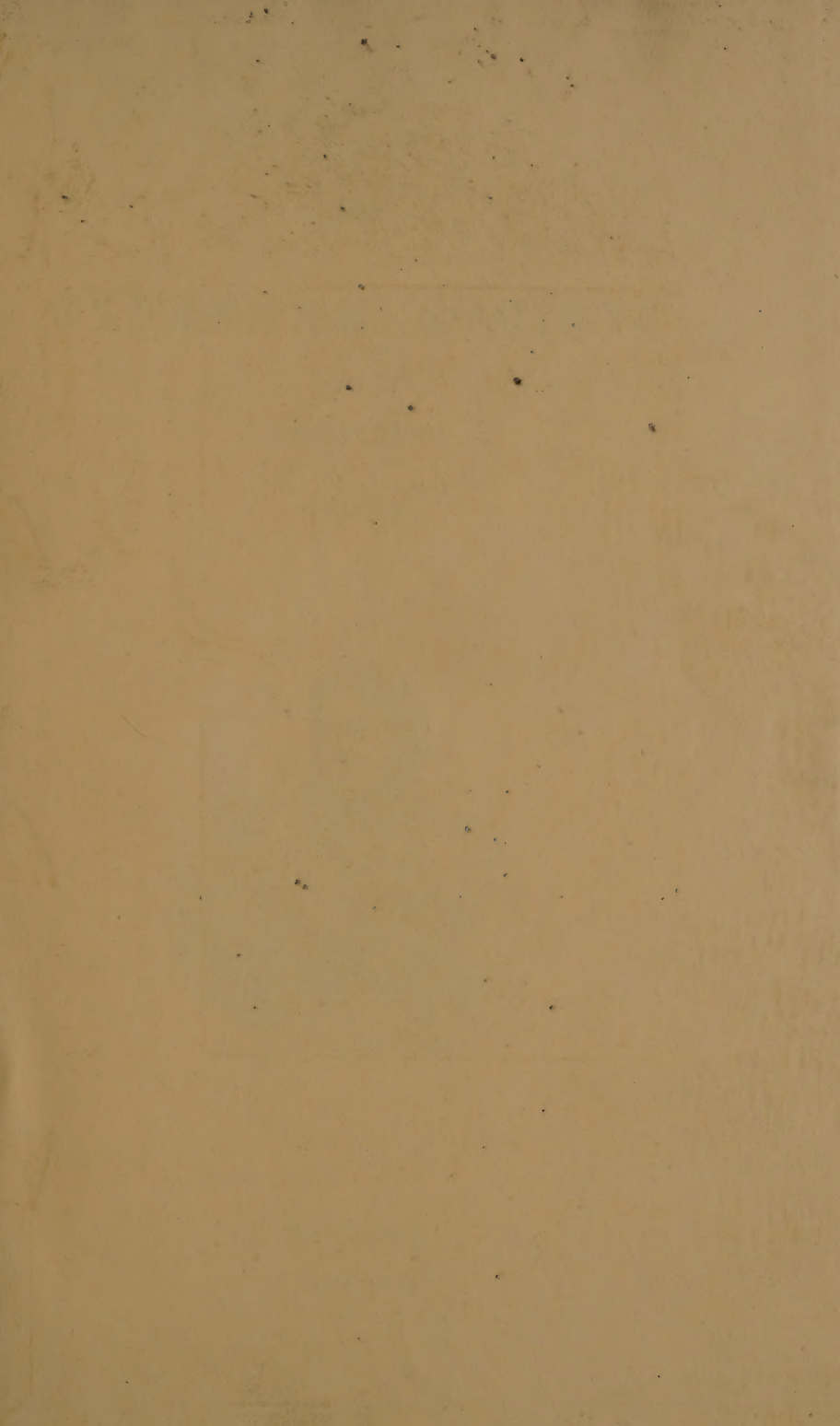
~~A. xxi. Rha.~~

TEXTS



PRESENTED TO  
The Owens College,  
BY  
MRS. LEECH,  
IN MEMORY OF  
**Daniel John Leech,**  
M.D., D.Sc., F.R.C.P.,  
THE FIRST PROFESSOR OF  
MATERIA MEDICA AND THERAPEUTICS  
IN  
THE OWENS COLLEGE,  
1881—1900.









THE  
SYDENHAM SOCIETY

INSTITUTED

MDCCCXLIII



LONDON

MDCCCXLVIII.



A TREATISE

ON THE

SMALL-POX AND MEASLES,

BY

ABÚ BECR MOHAMMED IBN ZACARÍYÁ AR-RÁZÍ

(COMMONLY CALLED *RHAZES*).

TRANSLATED FROM THE ORIGINAL ARABIC

BY

WILLIAM ALEXANDER GREENHILL, M.D.

LONDON

PRINTED FOR THE SYDENHAM SOCIETY

MDCCCXLVIII.



TESTS



PRINTED BY C. AND J. ADLARD,  
BARTHOLOMEW CLOSE.

## TRANSLATOR'S PREFACE.

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THIS volume contains the well-known "Treatise on the Small-Pox and Measles," by Rhazes, together with some chapters on the same subject taken from his three works called "Liber ad Almansorem," "Divisio Morborum," and "Liber Continens." The several Introductions contain a bibliographical\* account of each of these works, and such other information respecting them as seemed necessary; and therefore it only remains to say a few words here on the manner in which the Translator has endeavoured to perform his task.

With respect to the Translation itself, there are many passages that appear to be corrupt in the original text, and many also in which the sense is doubtful; in most of which the aid of a second MS. would probably have been very valuable and satisfactory.† Several of these have been specified in the Notes, but several have also been passed over in silence; as such points would probably be uninteresting to the greater part of the

\* In drawing up this bibliography, considerable assistance has been derived from several friends in London, who have consulted the libraries at the British Museum, the College of Physicians, the College of Surgeons, the Medical and Chirurgical Society, and the London Medical Society; and also from Dr. Marx, of Göttingen, and Dr. Daremberg, of Paris.

† It ought to have been stated more explicitly in p. 4, that the Translator had in his own house, for several weeks, three of the valuable Arabic MSS. belonging to the public Library at Leyden, which the liberal regulations of that University allowed Dr. Dozy to bring to England two years ago for his use.

subscribers to the Sydenham Society, for whom the work is more immediately intended.

For the same reason, and in compliance with the expressed wish of the Council, all unnecessary verbal criticism has been avoided in the Notes and Illustrations; but at the same time, before venturing to contradict the Author's assertion respecting Galen (p. 27.), it seemed absolutely essential to examine at some length into the real meaning of the Greek words which were supposed by the Arabians to signify the Small-Pox.

The different articles of the *Materia Medica* mentioned in the text will be found explained in the Arabic Index; which form was chosen as being that in which the largest amount of information could be comprised in the smallest space. In explaining these words the principal point was to endeavour to determine the modern scientific name of each article,—a task of no small difficulty, as is well known to all who have ever made the attempt.\* In this part of the work great assistance has been received from Dr. Pereira, the value of which was only equalled by the kindness and readiness, with which, in the midst of his numerous occupations, it was always furnished. It was thought advisable to add also the Greek name of each article, and a reference to the principal Arabic and Greek writers on *Materia Medica* by whom it is described.†

Upon the whole, the Translator is fully sensible of the imperfect manner in which he has executed his task; but he is inclined to hope that those who are best able to discover his faults will also be the most ready to make allowances for them, and to remember that it is only *part* of his time that

\* See the review of Sontheimer's *Ibn Baitár*, by Dr. Marx, in the *Hannov. Ann.* 6 Jahrg. Hft. 5. p. 597.

† The *Canon* of Avicenna has been referred to rather than the *Continens* of Rhazes, simply because it is so much more frequently met with. The work of Dioscorides that is referred to is of course his treatise *De Mater. Med.*; that of Galen, his work *De Simplic. Medicam. Temper. ac Facult.*



he is able to devote to these studies. And if he be told in answer, that this plea would form a very good reason for not publishing at all, but that it is no excuse whatever for sending forth books in an incorrect and slovenly manner, he fully allows that in most cases this is perfectly true ; but still he would venture to remind the objector, that professional works in any of the learned languages have almost always laboured under the peculiar disadvantage of being translated by persons who are imperfectly acquainted either with the subject matter, or with the language ; and that, if we wait till we can find any one equally and sufficiently familiar with both, the publications in this branch of medical literature will be even more “few and far between” than they have been hitherto.\* Any faults either of omission or commission that shall be pointed out to the Translator will be gratefully acknowledged, and in any similar work which he may hereafter be allowed to undertake, he hopes to profit by the experience he has gained in this.

OXFORD; *July* 22, 1847.

\* “If any one,” says Ockley, in the Introduction to his *History of the Saracens*, “if any one should pertly ask me, ‘Why then do you trouble the world with things that you are not able to bring to perfection?’ let them take this answer of one of our famous Arabian authors (Abulfeda, Praef. ad *Geograph.*); ‘What cannot totally be known, ought not to be totally neglected; for the knowledge of a part is better than the ignorance of the whole.’”

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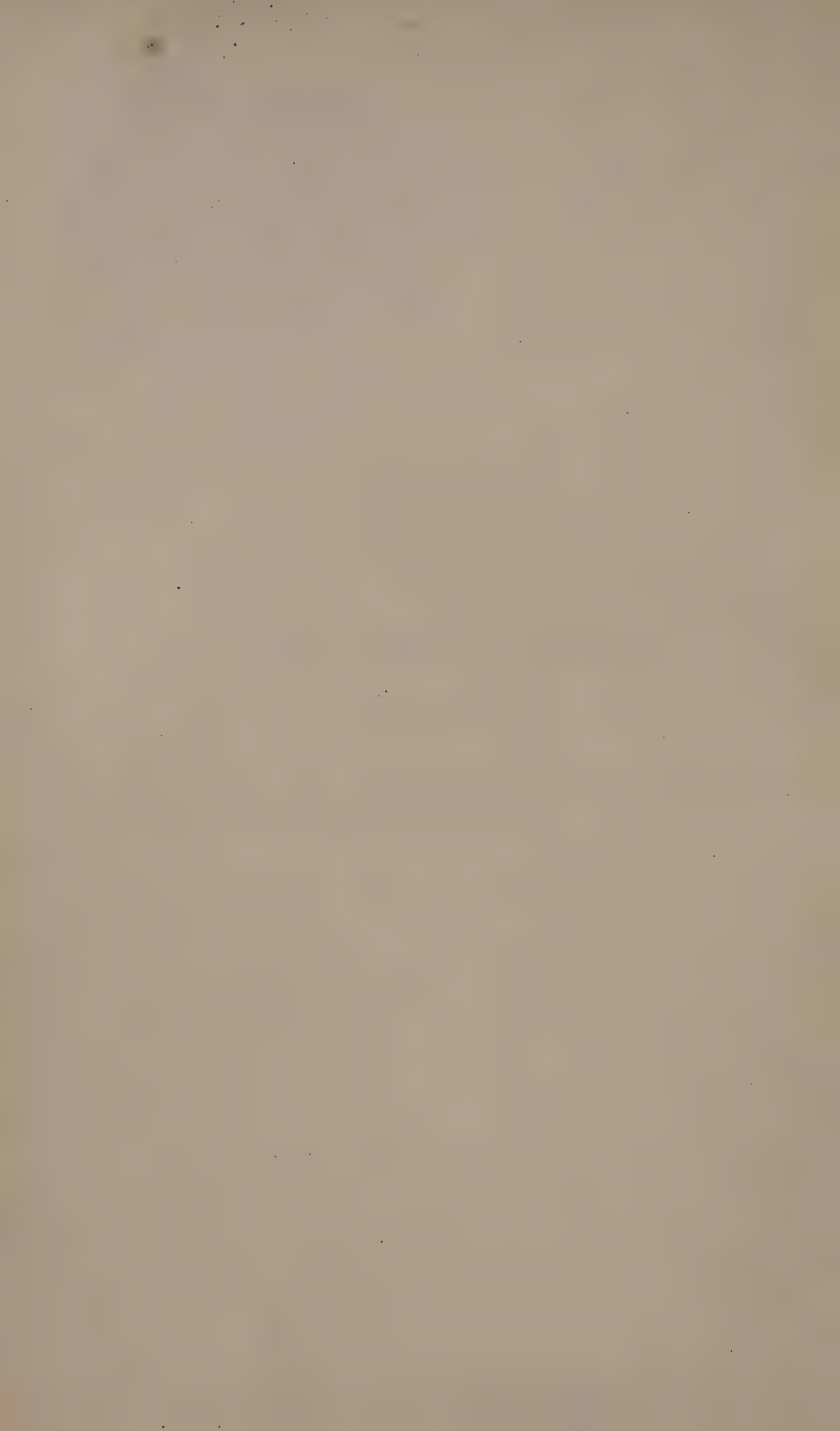
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كتاب في الجدري والحصبة ❦

A TREATISE ON THE SMALL-POX AND MEASLES.





## TRANSLATOR'S INTRODUCTION.

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OF the medical opinions contained in this little work, and its scientific merits, a sufficiently full account may be found in Haller's Preface (p. 19); of its literary history hardly anything is known. Its genuineness has never been doubted:<sup>1</sup> it has always been attributed to Rhazes, and it appears from internal evidence to have been written by the author of the work *Al-Mansúrí* (or *Liber ad Almansorem*<sup>2</sup>). The date of its composition is unknown; but it was certainly written later than the *Al-Mansúrí*, as it refers to that work by name; and from comparing certain passages in this treatise with the parallel ones in the *Continens*, (or *Al-Háwí*,) it would seem to have been written after that work also, the chapter on the Small-pox and Measles in the *Continens* being apparently only a collection of notes and memoranda roughly thrown together, and afterwards worked up and arranged by the Author in his Treatise on these two diseases.<sup>3</sup> It was translated from the original Arabic into Syriac, and from that language into Greek. Neither the date nor the author of either of these versions is known,<sup>4</sup> but the Greek translation (as we learn from the Preface,<sup>5</sup>) was made at the command of one of the Emperors of Constantinople, perhaps

<sup>1</sup> Mr. Adams has indeed in his Commentary on Paulus Aegineta (vol. i. p. 330) expressed a doubt whether the *Introduction* to the Treatise be not spurious, but there seems to be no sufficient reason for calling its genuineness in question.

<sup>2</sup> See below, ch. 14, § 1.

<sup>3</sup> Most of the principal parallel passages are referred to in the Notes.

<sup>4</sup> In one of the MSS. at Paris (§ 2228), the Greek translation is attributed to Joannes Actuarius, who lived probably towards the end of the thirteenth century.

<sup>5</sup> See below, p. 11.

(as Fabricius conjectures,<sup>1</sup>) Constantine Dukas, who reigned from A.D. 1059 to 1067.<sup>2</sup> It was from this Greek translation, (which appears to have been executed either very carelessly, or from an imperfect MS.,) and from Latin versions made from it, that the work was first known in Europe, the earliest Latin translation made directly from the original Arabic being that which was published by Mead in 1747. The Arabic text was published for the first time by Channing in 1766, together with a new Latin version by himself, which has continued to be the best up to the present time.

Of the Greek translation there are several MSS. in Europe.<sup>3</sup> Of the Arabic text the Translator is only aware of the existence of two MSS. in any European library, one at Leyden,<sup>4</sup> forming part of the collection bequeathed to the University by Levinus Warner about the beginning of the eighteenth century, and which is the basis of both Mead's and Channing's translations; and the other among the Codices Naniiani at Venice,<sup>5</sup> which has never hitherto been made use of. It is probable that the Arabic text of Channing's edition may be greatly improved, not only by collating the MS. at Venice, but also by a more careful examination of that at Leyden, which Channing himself never had an opportunity of inspecting. The Translator enjoyed this advantage for a short time; which, however, was sufficient to show him that several words and passages had been omitted and copied erroneously by Channing's transcriber.

The following list of the editions and translations of the

<sup>1</sup> *Biblioth. Graeca*, vol. xii. p. 692. ed. vet.

<sup>2</sup> If, however, Joannes Actuarius was the translator, the emperor alluded to will more probably be Andronicus II. Palaeologus, who reigned from A.D. 1281 to 1328.

<sup>3</sup> See the Catalogues of the Libraries at Paris, vol. ii. pp. 461, 465. §§ 2200, 2201, 2202, 2228; and at Florence, vol. iii. p. 97, § 18.

<sup>4</sup> See the Catalogue, p. 441. § 761. It is the fourth treatise in the volume, and fills twenty-nine small folio pages. It is written on oriental paper, and by an oriental scribe in the *neschi* character, and belongs probably to the fourteenth or fifteenth century. It is altogether tolerably legible, though the diacritical points are frequently wanting. In several places some words that have been omitted in the text are written in the margin, and in a few instances part of these words have been cut off by the bookbinder.

<sup>5</sup> See Sim. Assemani, *Catal. de' Cod. MSS. Orient. della Bibliot. Nan.*, vol. ii. p. 239. It is in a volume containing several other works by Rhazes, but no description or history of the MS. is given in the Catalogue.



work will be found, it is hoped, more accurate and complete than any that has hitherto appeared.

\*1498. fol. Venetiis, per Simonem Papiensem, dictum Bevilaquam.

A Latin translation by Giorgio Valla, in a volume containing treatises by several other authors. Title: "Georgio Valla Placentino Interprete. Hoc in volumine hec (*sic*) continentur: Nicephori Logica; &c. &c. Rhazes de Pestilentia," &c. &c. Translated from the Greek.

\*1528. 4to. Parisiis, apud Simonem Siluium.

A reprint of Valla's Latin translation, together with a work by Alessandro Benedetto. Title: "Rhazes Philosophus de Ratione curandi Pestilentiam e Græco in Latinū versus per Georgium Vallam Placentinum. Item Alexander Benedictus Veronēsis Physicus de Pestilenti Febre."

1529. 8vo. Parisiis. [Haller.]

\*1529. small 8vo. Basileae, in ædibus Andreæ Cratandri.

A reprint of Valla's Latin translation, together with a work by Michael Psellus. Title: "Pselli de Victus Ratione ad Constantinum Imperatorem libri ii. Rhazae, cognomento Experimentatoris, de Pestilentia Liber. Georgio Valla Placentino Interprete," &c. &c.

\*1544. fol. Basileae, in officina Henrichi (*sic*) Petri.

A reprint of Valla's Latin translation, together with several other works by Rhazes. Title: "Abubetri Rhazae Maomethi, ob Usum Experientiamque multiplicem, et ob certissimas ex Demonstrationibus logicis Indicationes, ad omnes præter Naturam Affectus, atq: etiam propter Remediorum uberrimam Materiam, summi Medici Opera exquisitiora, quibus nihil utilius ad Actus practicos extat, omnia enim penitus quæ habet aut Hippocrates obscuriora, aut Galenus fusiora, fidelissimè doctissimèq: exponit, et in Lucem profert. Per Gerardum Toletanum Medicum Cremonensem, Andream Vesalium Bruxellensem, Albanum Torinum Vitoduranum, Latinitate donata, ac jam primum quàm castigatissimè ad vetustum Codicem summo Studio collata & restaurata, sic ut à Medicinæ Candidatis intelligi possint," &c. &c.

\*1548. fol. Lutetiae [Paris.] ex officina Rob. Stephani, Typographi Regii, typis Regiis.

In Greek, together with Alexander Trallianus. Title: "Ἀλεξάνδρου Τραλλιανοῦ Ἱατροῦ Βιβλία δυοκαίδεκα. Ῥαζῆς Λόγος περὶ Λοιμικῆς ἀπὸ τῆς Σύρων Διαλέκτου ἑλληνοισθείς. Alexandri Tralliani Medici Lib. xii. Rhazae de Pestilentia Libellus ex Syrorum Lingua in Græcam translatus. Jacobi Goupyli in eosdem Castigationes. Ex Bibliotheca Regia." Very beautifully printed, and not very often met with. It contains only the Greek text, with a few pages of notes at the end of the volume.

\* An asterisk is prefixed to those editions which have been actually seen either by the Translator or by one of his friends. In other cases the author is mentioned on whose authority the existence of the edition is presumed.

- \*1549. 8vo. Argentorati, ex officina Remigii Guidonis.

A new Latin translation from the Greek, together with Alexander Trallianus, by Joannes Guinterius, dedicated to Abp. Cranmer. Title: "Alexandri Tralliani Medici absolutissimi Libri Duodecim; Razæ de Pestilentia Libellus. Omnes nunc primum de Græco accuratissime conversi, multisque in Locis restituti et emendati, per Joannem Guinterium Andernacum, D.M."

1555. 8vo. Venetiis, apud Hi. Scotum.

In Latin, together with Alexander Trallianus. [Choulant.]<sup>1</sup>

1555. 8vo. Patavii.

In Latin. [Haller.]

- \*1555. small 8vo. Venetiis, apud Andream Arriabenum, ad signum Putei.

A new Latin translation from the Greek by Nicolaus Macchellus. Title: "Razæ Libellus de Peste de Græco in Latinum Sermonem versus: per Nicolaum Macchellum Medicum Mutinensem."

- \*1556. small 8vo. Venetiis, apud Andream Arriabenum, &c.

The preceding edition, with a new title, bearing date 1556.

- \*1566. small 8vo. Poitiers.

A French translation from the Greek by Sebastian Colin. Title: "Traicté de la Peste, et de sa Guérison, premièrement escrit en Langue Syrienne, par Rases Medecin admirable, interprété en Grec, par Alexandre Trallian, et nouvellement traduit de Grec en François par M. Sebastian Colin, Medecin à Fontenay. Plus. Une Epitome," &c. &c.

1570. 8vo. Argent.

In Latin, together with Alexander Trallianus. [Choulant.]

1586. 8vo. Venetiis.

In Latin. [Fabricius.]

- \*1747. 8vo. Londini, prostant apud Joannem Brindley, &c.

In Latin, at the end of Mead's work on the same diseases. Title: "De Variolis et Morbillis Liber. Auctore Richardo Mead, &c. &c. Huic accessit Rhazis, Medici inter Arabas celeberrimi, de iisdem Morbis Commentarius." In this edition the work is for the first time called by its proper title "De Variolis et Morbillis," and for the first time translated into Latin from the original Arabic. It was translated from a transcript of the MS. at Leyden by Solomon Negri and John Gagnier, and revised by the Rev. Dr. Thomas Hunt, Professor of Arabic at Oxford. It is fuller and more correct than any former version.

- \*[1747.] 8vo. London, printed for John Reason, &c.

Translated for the first time into English from Hunt's Latin version, together

<sup>1</sup> *Handbuch der Bücherkunde für die Aeltere Medicin.* Leipzig, 8vo, 1840.

with a translation of Mead's treatise. Title: "Discourse of the Small-Pox and Measles, by Richard Mead, &c. &c. To this is subjoined the Commentary of Rhazes, a most celebrated Arabian physician, on the same Diseases. Translated from the Latin by John Theobald, M.D., author of the *Medulla Medicinæ Universæ*." There is no date on the title-page, but "Nov. 23, 1747," is appended to a prefatory letter by the Translator.

\*1748. 8vo. London, printed for John Brindley, &c.

A second English translation, from Hunt's Latin version, together with Mead's treatise. Title: "A Discourse on the Small-Pox and Measles, by Richard Mead, &c. &c. To which is annexed, a Treatise on the same Diseases by the celebrated Arabian Physician Abu-Beker Rhazes. The whole translated into English, under the Author's Inspection, by Thomas Stack, M.D., F.R.S."

\*1748. 8vo. Goettingae, ex Officina Abram. Vanderhoeck, Acad. Typogr.

Hunt's Latin translation, in the first volume of Mead's works. Title: "Richardi Mead, &c. &c. Opera Medica, &c. &c. Editio tertia, ad Editionem Londinensem."

\*1751. 8vo. Parisiis.

Hunt's Latin translation, among Mead's works. Title: "R. Mead Opera, &c. Anglica Interpretatus est A. C. Lorry," &c.

1752. 4to. Neap.

Hunt's Latin translation, among Mead's works. [Haller.]

\*1756. 8vo. London.

An English translation of Hunt's Latin version, together with Mead's treatise. Title: "An Accurate Translation of Dr. Mead's Latin Treatise on the Small-Pox and Measles. To which is annexed a Version of the Commentary of Rhazes, a celebrated Arabian physician, on the same Distempers." This is a reprint of Theobald's version, as appears from a comparison of the two works; but the translator's name is not mentioned.

\*1757. 8vo. Parisiis, apud Gulielmum Cavelier.

Hunt's Latin translation, in the first volume of Mead's works. Title: "Richardi Mead Opera Omnia," &c. &c. Apparently the Paris edition of 1751, with a new title-page, and some parts reprinted.

1758. 4to. Neap.

Hunt's Latin translation, among Mead's works. [Haller.]

\*1762. 4to. London, printed for C. Hitch and L. Hawes, &c. &c.

Stack's English translation, among Mead's works. Title: "The Medical Works of Richard Mead, M.D.," &c. &c.

1762. 8vo. Augsburg.

In German, from Hunt's Latin translation, together with Mead's treatise. [Haller.]

\*1763. 8vo. 3 vols. Edinburgh.

Stack's English translation, among Mead's works. Title: "The Medical Works of Dr. Richard Mead."

\*1765. 12mo. 3 vols. Edinburgh, printed for Alexander Donaldson, &c.

Stack's English translation, among Mead's works. Title: "The Medical Works of Richard Mead, M.D.," &c. &c.

\*1766. 8vo. Londini, excudebat Guilielmus Bowyer.

In Arabic and Latin. Title: "Rhazes de Variolis et Morbillis, Arabice et Latine; cum alijs nonnullis ejusdem Argumenti. Cura et Impensis Johannis Channing, Natu et Civitate Londinensis." The Arabic text is printed from a transcript of the MS. at Leyden, and differs occasionally from Hunt's translation in the order of the sentences, &c. The Latin version is a new one by Channing himself, and is literal without being barbarous or unintelligible. The notes are generally short and useful. At the end of the volume are added, in Latin, (as Channing had no access to the original text,) Rhazes *Almans*. x. 18. p. 203; Rhazes *Divis*. c. 159. p. 208; and Rhazes *Contin*. xviii. 8. and part of c. 4. pp. 213, 258; two extracts in Hebrew and Latin from Alzaravi, p. 262; a passage in Arabic and Latin from Ibn Jazlá, p. 270; and a medical formula in Arabic and Latin from Haly Abbas, p. 274. Dr. Russell, in the Appendix to his *Natural History of Aleppo*, vol. ii. Append. p. xi. says of this edition, that "he had the book collated with other MSS. in the East, and that the readings were upon the whole found very exact." It is neatly, but incorrectly, printed, there being many typographical errors in the Arabic text besides those specified in the list of *errata*. The extracts from the Latin edition of Rhazes are also very incorrectly printed; but some of these mistakes do not appear to belong to the printer, but to the transcriber, who did not understand the contractions used in the old book he was copying. It is probably now rather scarce, as the Translator had great difficulty in meeting with a copy for his own use in the present work. It is noticed by Schnurrer in his *Biblioth. Arab.*, p. 454, § 397.

\*1767. 8vo. Dublin.

Stack's English translation, among Mead's works. Title: "The Medical Works of Richard Mead, M.D.," &c. &c.

\*1768. 12mo. 2 vols. Paris.

Translated into French from Channing's Latin version by J. J. Paulet in his History of the Small-pox. Title: "Hist. de la Petite Vérole, &c. &c., suivie d'une Traduction Française du Traité de la Petite Vérole de Rhazès, sur la dernière édition de Londres, Arabe et Latine . . . par M. J. J. Paulet, Docteur en Médecine de la Faculté de Montpellier."

\*1772. 8vo. Lausannæ, sumptibus Franc. Grasset & Socior.

In the seventh volume of Haller's Collection of "Artis Medicæ Principes," or the second volume of his Alexander Trallianus. Title: "Artis Medicæ Principes, Hippocrates, Aretæus, Alexander, Aurelianus, Celsus, Rhazeus. Recensuit, præfatus est Albertus de Haller." It contains a reprint of Channing's Latin version, with all that is to be found in his edition, except the Arabic and Hebrew text, and the Arabic notes. The alterations and additions made by Haller are very trifling, with the exception of a Preface and a good Index Rerum.



## \*1774. 8vo. 2 vols. Bouillon.

In French, together with Mead's works. Title: "Recueil des Œuvres Physiques et Médicinales publiés en Anglais et en Latin par M. R. Mead, traduits en François, &c. par Coste."

## \*1775. 8vo. Edinburgh, printed for Alexander Donaldson, and Charles Elliot.

A reprint of Stack's English translation, together with Mead's works. Title: "The Medical Works of Richard Mead, M.D.," &c. &c.

## \*1781. 8vo. Goettingae.

A reprint of Channing's translation. Title: "Rhazes de Variolis et Morbillis Latine. Annexis quibusdam aliis Argumenti eiusdem, Interprete et Curante quondam J. Channing. Edidit J. C. Ringerbroig."

## 1787. 8vo. Lausannae, apud Jul. H. Pott.

A reprint of Haller's edition of 1772. [Choulant.]

If the foregoing list be tolerably correct, it will appear that the work has been published, in various languages, about five and thirty times in about three hundred and fifty years,—a greater number of editions than has fallen to the lot of almost any other ancient medical treatise. It must, however, be confessed that great part of its popularity has been owing to the patronage of Dr. Mead.

In translating the work, constant use has been made of the Greek version, of Channing's Latin translation, and of Stack's English translation, but none of these has been followed implicitly; so that, though the words of Dr. Stack have frequently been used, the present has nevertheless a right to be considered as a *new* English translation, made for the first time from the original Arabic.



## GREEK TRANSLATOR'S PREFACE.

### ῬΑΖΗ ΤΟΥ ΘΑΥΜΑΣΤΟΥ ἸΑΤΡΟΥ

λόγος περὶ Λοιμικῆς, ἐξελληνισθεὶς ἀπὸ τῆς Σύρων διαλέκτου  
πρὸς τὴν ἡμετέραν.

#### Προοίμιον.

Ὅτι μὲν οὐδέν τι τῶν συνιστώντων τὴν ἰατρικὴν τέχνην παρα-  
λέλοιπε Γαληνός, θεόσεπτε καὶ αἰσέβαστε Αὐτοκράτορ, οὐδέ τι  
τῆς τῶν σωμάτων θεραπείας τὲ καὶ ἐπιμελείας τὴν αὐτοῦ διάνοιαν  
ἐκπέφενγε, πᾶσιν, οἶμαι, διωμολόγηται, ὅσοι τοῖς ἐκείνου συγ-  
γράμμασί τε καὶ πονήμασιν ἐμμελῶς ἐντετυχήκασιν. Οὐ μὴν  
ὥσπερ γε τοῖς ἄλλοις πεπόνηται αὐτῷ αἱ πραγματεῖαι, οὕτω δὴ  
καὶ ἡ περὶ τῆς Λοιμικῆς νόσου ἐξήπλωται διδασκαλία. Ἀλλὰ  
μέμνηται μὲν καὶ ταύτης ἐν τισι λόγοις κατὰ πάροδον, καὶ ἐκ τοῦ  
προήκοντος, ἐπεὶ μηδὲ σκοπὸν ἔθετο θεραπείαν τινὰ διδάξαι.  
Ὡστε οὐ θαυμαστὸν εἰ μηδὲν τι ἀξιόλογον ἔνιοι τῶν νῦν ἰατρῶν  
περὶ τὴν ταύτης ἐπιμέλειαν ἐνεδείξαντο, ἅτε μηδένα ἱκανὴν διδασ-  
καλίαν καὶ ἀπηρτισμένην πρὸς τοῦ τῆς τέχνης καθηγητοῦ παρα-  
λαβόντες. Ἐκείνο μὲν οὖν θαύματος ἄξιον, ὅπως ὁ τὴν ἰατρικὴν  
τέχνην συγκεχυμένην οὔσαν διοργανώσας, καὶ περιορίσας τὰ  
ἀόριστα, κατέλιπε πρᾶγμα τῶν ἄλλων ἀπάντων ἀναγκαιότοτον.  
Οὐδεὶς γοῦν σχεδὸν ἀνθρώπων, ὃς οὐχ ἄλωτὸς τῷ τοιούτῳ νοσή-  
ματι καθίστηκεν· ἡ δὲ αἰτία λελέξεται ἐν τῇ προσήκοντι. Καὶ μέντοι  
καὶ μετὰ τοὺς χρόνους τοῦ Γαληνοῦ ἄνδρες ἐλλόγιμοι τὴν Ἑλλη-  
νικὴν φωνὴν ἔργῳ καὶ λόγῳ διαπρέψαντες, καὶ τὸν νοῦν πρὸς τὰ  
ὑψηλότερα τῶν μαθημάτων μετεωρίσαντες, εἰς ἄλλα μὲν τινα  
σπουδῆς κάκεῖνα ἄξια ὅτι πολλοὺς ἐξετηνύχασιν· ταύτης δὲ οὐδεὶς

τούτων ἐμνήσθη, οὐκ οἶδα καθ' ὁπότερον, εἴτε οὐκ ἦν αὐτοῖς βούλησις, εἴτε οὐ προσῆν τῇ βουλήσει καὶ δύναμις. Ἡμεῖς δὲ εἰ καὶ μηδὲν νῦν οἴκοθεν συνεισφέρομεν, ἀλλ' οὖν πειθόμενοι τῷ προστάγματί σου, τὴν παρὰ τοῦ σοφοῦ τούτου Ῥαζῆ καλλίστην καὶ τελειοτάτην περὶ τῆς Λοιμικῆς νόσου πραγματείαν, Σαρακηνικαῖς λέξεσιν ἐκτεθειμένην, εἰς τὴν Ἑλληνίδα μεταμειψάμενοι φωνήν, ἡνέγκαμεν τῷ κράτει σου, ὡς ἂν μηδὲ ταύτης ἄμοιρος ἡ θεόσοφός σου εἴη ψυχὴ, ψυχωφελοῦς οὔσης τῆς σπουδῆς, καὶ κοινωφέλοῦς τῆς προνοίας. Εἰ δὲ εὐγνώμονες καὶ δεκτέοι κριθείημέν σοι τῷ ἀγαθῷ δεσπότῃ καὶ βασιλεῖ, σοὶ χάρις ἂν εἴη τῷ προτρέψαντι καὶ κινήσαντι, καὶ καθ' ἐκάστην πρὸς πᾶν ἀγαθὸν ὁδηγοῦντι. Ἀρξώμεθα οὖν τὴν τοῦ σοφοῦ διδασκαλίαν ἐξελληνίσαι, τὴν ἐνυπόστατον ΘΕΟΥ Σοφίαν ὁδηγὸν γενέσθαι ἐπικαλούμενοι, ἀπταίστως διελθεῖν τὴν προκειμένην θεωρίαν, καὶ μὴ ἐπὶ θάτερα μετακλίνειν· ἀλλ' ὥσπερ ἐπὶ κάλων βαίνοντες, ἀτρέμα διოდένοντες ἔνθεν κακείθεν, ἄρρεπεῖς τε καὶ ἄτρεπτοι, μήτε λέξιν ἐπαμφοτερίζουσιν διαλαθεῖν ἡμᾶς, μηδ' αὖ νόημα ἀμφιλαφές καὶ ὑψιπετές διαδιδράσκειν. Οὗτος τοίνον ὁ θαυμαστός ἀνὴρ εἰς δύο ἤδη τεμὼν τὴν νόσον, εἰς πεντεκαιδέκα τὴν ὅλην πραγματείαν ἐμερίσατο.



## EXTRACT FROM MEAD'S PREFACE,

TRANSLATED BY DR. STACK.

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. . . . . WHEN I had finished this small work, I thought it might be no less agreeable than useful to the gentlemen of the faculty, if to it I annexed Rhazes's treatise of the Small-pox and Measles, faithfully translated from the original Arabic into Latin: as it contains an ample detail of many things relating to the nature and cure of these diseases, which, making proper allowances for time and place, coincide pretty much with the doctrines I have laid down. And indeed, it has given me no small pleasure, to see my sentiments confirmed by the greatest physician of the age he lived in. But I have often wondered how it came to pass, that this book had never before been published either in Arabic, or in Latin from the Arabic. Robert Stephens was the first who published it in Greek, at the end of his edition of Alexander Trallian's work, in the year 1548. The Greek copy has been translated into Latin by three several persons; the first of whom was Georgius Valla, of Placentia, whose version was published at Venice, A.D. 1498, and went through several editions. This was followed by a second, done by Johannes Guinterius, of Andernac, printed at Strasbourg in 1549: and Nicolaus Macchellus, a physician of Modena, put forth a third, printed at Venice in 1555, and again, in 1586. Now, the Greek copy was not translated directly from the Arabic, but from a Syriac version, which latter seems to have been done for the use of the common people; and upon comparing the Greek with this Latin translation from the Arabic, which I now publish, it will appear very inaccurate, by the entire omission of some things, and faulty rendering of others; whether through the insufficiency or negligence of the Syriac or Greek translator, I shall not determine. But the manner how I acquired my copy is this.

After having caused a diligent search to be made in our public libraries for an Arabic copy of this treatise to no purpose, I wrote to my good friend the celebrated Dr. Boerhaave, Professor of Physic in the University of Leyden, entreating him to inform me, if such an one could be found in the public Library there, which I knew to be very rich in Arabic manuscripts. A copy was accordingly found, which he got transcribed by the Arabic Professor, and kindly sent it over to me; but it proved to be full of faults. This, however, I gave at two separate times to two gentlemen of character, to put it into Latin. One was Solomon Negri, a native of Damascus, extremely well versed in all the Oriental tongues; the other John Gagnier, Arabic Reader at Oxford: and they both performed the task with great diligence. But upon comparing the two versions, I observed that they differed in several places, not in the diction only, but even in the sense: wherefore, as I have no knowledge of the Arabic tongue, I could not determine which of the two to prefer. This uncertainty made me apply to my worthy friend, the Reverend Dr. Thomas Hunt, for several years past Arabic Professor in the University of Oxford, and lately made Hebrew Professor likewise, who, among his many eminent qualities, is universally esteemed a great master of the Eastern languages. This gentleman, at my request, generously undertook the province of strictly collating the two Latin versions above mentioned with the Arabic copy, in my presence; and out of them he compiled this, which I now give to the public; and doubtless he would have made it much better, had the Arabic copy been more correct.

*London, Sept. 29,*

MDCCXLVII.

## CHANNING'S<sup>1</sup> PREFACE.

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LECTORI CANDIDO ET BENEVOLO, S.

QUID in hoc libello praestitum sit, paucis accipe. Textus Arabicus tractatus Rhazis, "De Variolis et Morbillis," nunc primum typis evulgatur, ad fidem archetypi codicis MS. in Bibliotheca Lugduno-Batava servati, ex apographo, sub cura doctissimi Professoris H. Schultens, manu eruditi et generosi juvenis Eberhardi Schedii exarato. Vir nobilis et ornatissimus Carolus Yorke, Angliae nostrae decus et deliciae, suppeditavit exemplar.

Ubicunque vox in exemplari describitur sine punctis, ex quorum absentia vel minimum de sensu dubium oriri potuit, vox ista nuda pingitur in margine paginae, sub his literis, "MS. L." Idem factum est, ubi puncta diacritica consulto mutantur. Ubicunque vel levissima ab exemplari facta est variatio, quae sensui supplendo necessaria videbatur; ista lectio, quam repudiandam esse censi, in margine notatur: adeo ut textus impressus codicis Leidensis veritatem integram repraesentare merito profiteatur.

Interpretationis Latinae maxima erit commendatio, si fidelitati perspicuitatem conjunctam habeat. Utrique sane studui, de sermonis elegantia parum sollicitus, modo barbariem effugerem. Paucis doctissimi nostratis Pocockii contigit felicitas, qui, dum partes interpretis egit integerrimus, scriptoris originarii meruit honores. Nobis non licet esse tam beatis; sufficiat tantum imitari magistrum, et sequi, quamvis "non passibus aequis."

Quoad modum reddendi: versio est *ad literam*, ut aiunt. Pressa est, et verbum verbo reddit, quantum fieri potuit, evitata soloecismi foeditate: ut non solum Rhazis periodi, verum etiam

<sup>1</sup> Of Channing's personal history the translator has only been able to learn that he was an apothecary, who lived in London, and died probably about the year 1780.

mens, verba, idioma exhibeantur. Ubi minus id passus est linguae Latinae genius, ad imum paginae notatur phrasis Arabica. Quae in vertendo voces ellipticae supplentur, charactere Italico distinctae indicantur. Nec bilem tibi moveant vocabula Arabica in textu Latino enuntiata; uti e. g. *Sauic*, *Massahhakownia*, *Tebáshir*, et alia paucissima, quorum in margine explicationem videbis: quae ideo non vertuntur, vel quia vox nulla Latina eorum sensui ad amussim respondeat, vel quia de re ipsa dubitetur.

Insuper observandum est, quod versio, quoad sensum, cum ea conveniat (ut inter legendum facile percipies,) quam Clariss. Meadus libello a se composito de Variolis et Morbillis subjunxit: quamque, ex apographo in quamplurimis locis corruptissimo, Meadi rogatu, confecit pari fide et elegantia amicissimus mihi Reverendus admodum Thomas Hunt, S. T. P., Aedis Christi Canonicus, in celeberrima Academia Oxoniensi linguarum Hebraicae et Arabicae Professor doctissimus; cujus amicitiam et familiaritatem inter praecipuas vitae meae felicitates numerare gloriatur; cuique, in hujusmodi studiis fautori atque auspici, quam maximas habeo atque ago gratias.

Tot in codice Meadiano mendae fuerant, tam crebrae lacunae, ut Virum Clarissimum deterruerint a proposito, quod in animo dudum habuerat, textum Arabicum edendi, sub cura ejusdem Viri Doctissimi; qui, pro summa qua pollet Arabicae linguae peritia, interpretationem mea hacce sine dubio meliorem erat daturus, si codicem emendatiorem nactus fuisset.

Metaphrastae Graeco debitus honos ubique tribuitur; quem comitem perpetuum habui.

Subjuncta sunt capitula duo Rhazis: *Ad Almansorem*, sc. Cap. 18, libri decimi; et Cap. 159, libri *Divisionum* dicti. Ex *Continente* etiam, ut vocatur, sive *Pandectis* Rhazis, additur caput integrum, octavum sc. libri xviii.; necnon historia filiae Hebelthuseyn filii Habuhe, a Cl. Freindio laudata, ex editione Brixiae, A.D. 1486.<sup>1</sup>

<sup>1</sup> Interpres fuit Feragius Judaeus, Caroli, Jerusalem et Neapolis regis ejus nominis primi, medicus. Surianus enim, qui monachus Camaldulensis tandem evasit, in editione Veneta, A.D. 1542, antiquam Feragii versionem exhibuit, at Rhazis ordinem mutavit; et ad libitum, numerum librorum, et tractatum loca, mira *licentia*, dicam, an *futilitate*, perturbavit. Habes in praefatione confitentem reum: et, quod plus est, etiam de facinore suo gloriantem. Idem cuique patebit, qui doctissimi Casirii cata-



His alia pauca subnectuntur: Alsaharavii nimirum (Codic. *Laud.* No. 167. A.) ex interpretatione Hebraea Meshullam Ben Jonah; et Ebn Giazlae sectio, ex libro *Tacwimo'l Abdani*, sive *Tabulae Aegritudinum*, unde patebit, quinam fuerit curandi modus, hujus Auctoris seculo usurpatus.

Ne libellus in nimiam molem excresceret, Avicennae tractatum non exhibeo; caeterum lectu dignissimum, et vetustiorum<sup>1</sup> Arabum doctrinae plane consentaneum. Adduxisse supervacaneum foret profecto, cum ad manus omnium sit parabilis, et textus Arabicus Romae impressus, A.D. 1593, et Plempii versio elegans Latina, Lovanii 1658.

Quae in Rhazis *Continente*, et reliquis ejus tractatibus, necnon in caeteris quae adducuntur veterum monumentis, regimen alvi spectant, haec omnia caractere Italico imprimuntur. Ea igitur textus portio, veluti in tabula picta, monstrabit eorum doctrinam de purgantibus adhibendis vel evitandis: id quod non sine fructu fore medicinae candidatis persuasissimum habeo. Arabas, ad unum omnes, idem de hac re praecipere constabit: adeoque his satius esse, ex eorum scriptis, quam recentiorum commentis, celeberrimorum licet, doceri. Nec oleum et operam perdidisse forsitan ille queretur, qui eorum monita de cura membrorum, imprimis oculi, serio perpenderit.

Annotatiunculae passim sparguntur, quae, Editori saltem, necessariae esse videbantur. Si non aliam, novitatis profecto laudem mereantur; utpote ex auctoribus vel nondum excusis, vel minime vulgaribus, excerptae, et ad rem vel materiam medicam explicandam accommodatae. Si nimiae sint, si Tibi minus necessariae, praetergredere.

Tractatum Rhazis, et *Continents* capitula, antiquae versionis barbarie foedata exhibere coactus fui; cum textus horum Arabicus nusquam, quod sciam, in Britannia supersit.<sup>2</sup> In Escorialensi<sup>3</sup> Bibliotheca, *Continents*, sive *Pandectarum*, pars maxima servatur: In codice No. 813, Liber xviii. in quo occurrit capitulum de Variolis et Morbillis, et Historia filiae

logum codicum Rhazis in Bibliotheca Escorialensi extantium comparaverit cum editionibus Brixiae et Venetiarum. In utraque Rhazes lingua Latino-barbara loquitur; atqui in Brixienſi, proprio ordine; in Veneta, Suriani.

<sup>1</sup> Vide Freind, *Epist. de Purgant.* (Opera, 4to, p. 97, fol. pp. 335-6.)

<sup>2</sup> [This is not correct, as in the present work the extracts from the *Continens* are translated from an Arabic MS. in the Bodleian Library.]

<sup>3</sup> Vide Casirii *Biblioth. Arabico-Hisp. Escur.* tom. i, p. 260.

Hebelthuseyn filii Habuhe; quorum si compos fuisset, versionem novam (non aequè horridam, confido,) adaptare decreveram. At de spe tanta ipse decidi: "alios laus illa manebit." Renascetur olim literaturae Orientalis cupido; et desinet progenies tandem oritura id nihili pendere et contemnere quod non satis intelligit.

Reverendis Vice-Cancellario Oxoniensi, caeterisque Bibliothecae Bodleianae Curatoribus, maximae debentur gratiae, quorum permissu mihi, homini inquilino, ad Codicum MSS. thesaurum vere nobilem patuit accessus. Mente gratissima teneo, semperque tenebo, tantorum virorum beneficium, humanitate, candore, more conferendi, geminatum.

Accipe, Lector candide, libellum, qui quoad hunc morbum *classicus* appellari meruit; utilem forte quodammodo, licet minus necessarium. Si nimiae sint annotatiunculae, ignoscas. Scriptitat plusquam sexagenarius! Errata, benevole, corrigas leviora; gravia, spero, nulla supersunt. Nec paucis offendare maculis,

"—quas aut incuria fudit,  
Aut humana parum cavit natura."

Si has primitias Tibi gratas esse sentiam, Albucasis, sive Alsaharavii, inter Arabas insignis, opus de Chirurgia, quod ex duobus MSS. in Bibliotheca Bodleiana servatis olim descripsi, cuique versionem Latinam fere novam accommodavi, brevi sequetur.<sup>1</sup> Vale.

MDCCLXVI.

<sup>1</sup> [This work he published in 2 vols. 4to, Oxon. 1778.]

## ALBERTI VON HALLER PRAEFATIO AD RHAZEUM.

Ut cum Graecorum Principibus hunc unum Rhazeum conjungerem, fecit operis praestantia, tum opportunitas utendi labore Johannis Channing, cujus editio ob Arabicum textum additum ex codice Bibliothecae Leidensis, et pretiosa sit et difficilius comparetur. Novam etiam versionem Vir Cl. dedit, atque Arabem suum ad literam expressit. Codicem secutus est a prioribus codicibus valde diversum, ut comparando cum Graeca versione comperi, cujus potissimum octavum caput multo quam hujus nostrae editionis brevius est.

Non ideo, quae bona Rhazeus habet, continuo ad eum solum pertinent. Nam ex adjectis a Cl. Channing *Continents* fragmentis discas, dudum ante nostrum, Mohammedem, Aaronem, Georgium, (Fil. Baktishua,) et Maserjawaih, et de Variolis scripsisse, et fere eadem quae noster dedisse consilia: ut non quidem antiquior de Variolis auctor dicendus sit, etsi eorum quos habemus est antiquissimus. Idem est auctor, qui librorum *Ad Almanzor*, quos citat (c. 14). Ignoscas bono vivo, Graecae linguae imperito, quod Galenum omnino putet de Variolis scripsisse (*De Variol.* c. 1, *Cont.* §§ 56, 65, 66.), etsi miratur nihil de tanti morbi curatione apud eum virum legi. (*De Variol.* *ibid.*)

Theoria ei fuit ejusmodi, ut in pueris Variolas putet tamquam ab effervescentia provenire, qua ex puerili statu in juvenilem evehantur, qualis in musto viget effervescentia, per cujus efficaciam in vini statum transit. Quoties adeo debile nimis homini temperamentum est, fieri posse, ut Variolae omnino non erumpant (c. 1). Esse ubi bis, etiam ter, eundem hominem agrediantur (in *Continents*).

Invadere sub autumnum (*De Variol.* c. 1): majori dorsi dolore a Morbillis distare, in quibus moeror et nausea magis infestent (c. 3). Primo die adparere quando celerrime, quarto quando lentissime (c. 14). Sed etiam distinctas et confluentes recte distinguit (c. 14); et malas esse confluentes non ignorat.

Parvas duras et verrucosas funestas esse (c. 8). Dolores in articulis designare, partem eam in putredinem transituram (c. 14, 7). Sphacelum tibiae Variolis supervenisse, sanguinisque per poros omnes eruptionem, cum tamen vena fuisset secta (c. 7, et *Contin.*). Haemorrhagiam narium salutarem esse, eamdem subsidere funestum (c. 14, et *Contin.*).

In principio mali vehementer conatur, ut impetum Naturae frangat; ad diem enim quartum usque, aut cucurbitulis in pueris, aut secta vena post annum decimum quartum, sanguinem detrahit (c. 5). In plethoricis sanguinem ad animi usque deliquium mittit (*ibid.*), et venae-sectionis utilitatem se in nosodochio esse expertum ad diem quartum usque (*Cont.* §58, et *ibid.*) testatur. Sed etiam alvum molliri jubet; infusionibus quotidie in potu sumptis (c. 5). Alvum etiam duxit in nobili virgine Hebethuseyn.

Victum acidum praescribit, non tamen ut carnibus jubeat abstinere (*ibid.*). Ita et medicamenta acida dat, sed iis camphoram miscet (*ibid.*). Aquam dat nive refrigeratam (*ibid.*), quae sudorem moveat, et eruptionem adjuvet (c. 6). Morbillis frigidam etiam magis prodesse (c. 13).

Esse ubi potuerit eruptionem omnem avertere, ut aut omnino nullae Variolae adparerent, aut mitissimae (c. 5, et *Contin.*)

Frigus ipsum ipse tamen et alii vetant admitti (*Contin.*).

Sed refrigerantem etiam utique hanc curandi rationem non feliciter succedere fatetur. Nam ex refrigerantibus nonnunquam anxietatem subnasci (c. 6), tunc Medicum ad sudorem movendum se convertere; signa etiam dat, quando calida medicamenta dare oporteat (*ibid.*). Ita docet necesse fore promovere eruptionem, si ultra diem quintum eruptio cessaverit (c. 6). Conferre ad eum finem cutem mollire calidae fotu (*ibid.*).

Post diem septimum omnino a purgantibus medicamentis abstinendum (*passim*) esse.

Peculiariter laborat in oculis defendendis, periculum enim sibi metuit, si pustula in oculo eruperit (c. 7). Utitur vero fere adstringentibus medicamentis (*ibid.*). In angina quam a Variolis metuit (*ibid.*), venam audacter secat. Pustulas magnas perforat (*ibid.*).

Consilia dat ad siccationem promovendam; si renuant, salem adspersit (c. 8); monet tamen ne is salis usus ante tempus adhibeatur (*Contin.*).



Multa molitur ad delenda vestigia (c. 10).

Adparet Rhazeum absque verioris theoriae praesidio intellexisse, in principio morbum ut inflammationem curari debere, inde post eruptionem, viribus sustentandis et avertendae putredini studeri.

Paucula ego correxi, dum operis folia edebantur. Vale,  
Lector amice.

*Die 2 Jan.*

MDCCLXXII.



# TREATISE ON THE SMALL-POX AND MEASLES.<sup>1</sup>

p. 2.<sup>2</sup>

## AUTHOR'S PREFACE.<sup>3</sup>

IN the name of GOD, the Compassionate, the Merciful.<sup>4</sup>

Abú Beér Mohammed Ibn Zacaríyá<sup>5</sup> says :—It happened on a certain night at a meeting in the house of a nobleman, of great goodness and excellence, and very anxious for the explanation and facilitating of useful sciences for the good of mankind, that, mention having been made of the Small-Pox, I then spoke what came into my mind on that subject. Whereupon our host (may GOD favour men by prolonging the remainder of his life,) wished me to compose a suitable, solid, and complete discourse on this disease, because there has  
p. 4. not appeared up to this present time either among the ancients or the moderns an accurate and satisfactory account

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<sup>1</sup> See below, Note A.

<sup>2</sup> The figures in the margin refer to the pages of Channing's edition.

<sup>3</sup> This Introduction (with the exception of the heads of the Chapters,) and part of the first Chapter are wanting in the Greek Translation.

<sup>4</sup> See below, Note B.

<sup>5</sup> That is, Rhazes himself: see below, Note C.

of it. And therefore I composed this discourse, hoping to receive my reward from the Almighty and Glorious GOD, and awaiting His good pleasure.

The plan of my undertaking, and the subject of the chapters is as follows :—

#### CHAP. I.

Of the causes of the Small-Pox, and how it comes to pass that hardly any one escapes the disease . . . . . p. 27

#### CHAP. II.

A specification of those habits of body which are most disposed to the Small-Pox; and also of the seasons in which the disease is most prevalent . . . . . p. 32

#### CHAP. III.

Of the symptoms which indicate the approaching eruption of the Small-Pox and Measles<sup>1</sup> . . . . . p. 34

p. 6.

#### CHAP. IV.

A specification of the articles of the regimen or treatment of the Small-Pox in general . . . . . p. 36

<sup>1</sup> The Greek Translator has τῶν δύο εἰδῶν τῆς Λοιμικῆς, “the two kinds of Λοιμική,” using the word Λοιμική in a generic sense, comprehending the two species, *Small-Pox*, and *Measles*. Thus, too, in the Greek work that bears the title of Synesius “De Febribus,” the Small-Pox and Measles are called ἡ ἀ Λοιμική, and ἡ β' Λοιμική; and the chapter on these diseases is headed, Περὶ τῆς φλυκταϊνούσης Λοιμικῆς, καὶ τῆς ἐτέρας λεπτῆς καὶ πυκνῆς Λοιμικῆς. (Cap. ix, p. 288).

CHAP. V.

Of the preservation from the Small-Pox before the symptoms of the disease appear,  
and the way to hinder the multiplying of the pustules<sup>1</sup> after the appearance of  
the symptoms . . . . . p. 37

CHAP. VI.

Of those things which accelerate the pustules of the Small-Pox and their appearance  
externally, and which assist Nature herein . . . . . p. 47

CHAP. VII.

Of the care to be taken of the eyes, throat, joints, ears, and those parts of which it  
is necessary to take care upon the appearance of the symptoms of the Small-  
Pox . . . . . p. 51

CHAP. VIII.

Of those things which hasten the ripening of those pustules which can be  
ripened . . . . . p. 56

CHAP. IX.

Of the drying of those pustules which are ripened . . . . . p. 57

p. 8.

CHAP. X.

Of those things which take away the scabs of the Small-Pox and the eschars . . . . . p. 59

CHAP. XI.

Of those things which take away the marks of the Small-Pox from the eyes and the  
rest of the body . . . . . p. 60

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<sup>1</sup> The Greek Translation has, ὥπως μὴ ὅλως συνίστηται, ἢ ἵνα μὴ εἰς ἀμετρίαν  
προήκῃ.



## CHAP. XII.

Of the regulating the patient's food in the Small-Pox . . . p. 64

## CHAP. XIII.

Of the regulating the patient's bowels in the Small-Pox . . . p. 67

## CHAP. XIV.

Of the mild and the fatal species of Small-Pox . . . p. 71

p. 10.

## CHAPTER I.

*Of the causes of the Small-Pox; how it comes to pass that hardly any one escapes the disease; and the sum of what Galen says concerning it.*

As to any physician who says that the excellent Galen has made no mention of the Small-Pox, and was entirely ignorant of this disease, surely he must be one of those who have either never read his works at all, or who have passed over them very cursorily. For Galen describes a plaster in the first book of his treatise *κατὰ γένος*,<sup>1</sup> and says that it is useful against this and that disease, "and also against the *Small-Pox*."<sup>2</sup> Again, in the beginning of the fourteenth book of his treatise "On  
p. 12. Pulses,"<sup>3</sup> at about the first leaf, he says, that "the blood is sometimes putrefied in an extraordinary degree, and that the excess of inflammation runs so high that the skin is burned, and there break out in it the *Small-Pox* and excoriating erysipelas<sup>4</sup> by which it is eroded."<sup>5</sup> Again, in the ninth book of his treatise "On the Use of the Members,"<sup>6</sup> he says that "the superfluous parts of the food that remain, which are not converted into blood, and remain in the members, putrefy, and become more acid, in process of time, until there are generated the erysipelas, *Small-Pox*, and spreading inflammation."<sup>7</sup> Again, in the fourth book of "Timaeus"<sup>8</sup> he says that "the

<sup>1</sup> See below, Note D.

<sup>2</sup> This sentence occurs also below, *Cont.* §§ 56, 65, and each passage serves slightly to improve the text of the other.

<sup>3</sup> See below, Note E.

<sup>4</sup> See below, Note F.

<sup>5</sup> This sentence also is quoted below, *Cont.* § 65.

<sup>6</sup> See below, Note G.

<sup>7</sup> This passage is quoted below, *Cont.* §§ 56, 65.

<sup>8</sup> See below, Note H.

p. 14. ancients applied the name *φλεγμονή* to every thing in which there was inflammation, as the erysipelas, and *Small-Pox*, and that these diseases were in their opinion generated from bile.”<sup>1</sup>

(2.) If, however, any one says that Galen has not mentioned any peculiar and satisfactory mode of treatment for this disease, nor any complete cause, he is certainly correct; for,<sup>2</sup> unless he has done so in some of his works which have not been published in Arabic, he has made no further mention of it than what we have just cited. As for my own part, I have most carefully inquired of those who use both the Syriac and Greek languages, and have asked them about this matter; but there was not one of them who could add anything to what I have mentioned; and indeed most of them did not know what he meant by those passages which I have distinctly  
p. 16. quoted. This I was much surprised at, and also how it was that Galen passed over this disease which occurs so frequently and requires such careful treatment, when he is so eager in finding out the causes and treatment of other maladies.

(3.) As to the moderns, although they have certainly made some mention of the treatment of the Small-Pox, (but without much accuracy and distinctness,) yet there is not one of them who has mentioned the cause of the existence of the disease, and how it comes to pass that hardly any one escapes it, or who has disposed the modes of treatment in their right places. And for this reason we hope that the reward of that man who encouraged us to compose this treatise, and also our own, will be doubled, since we have mentioned whatever is necessary for the treatment of this disease, and have arranged and carefully disposed every thing in its right place, by GOD’s permission.

p. 18. (4.) We will now begin therefore by mentioning the efficient cause of this distemper, and why hardly any one escapes it; and then we will treat of the other things that relate to it, section by section: and we will (with GOD’s

<sup>1</sup> This passage is quoted below, *Cont.* § 56.

<sup>2</sup> Here and in one or two other places the expression “Per DEUM” has been omitted, because, though perfectly natural and inoffensive in Arabic writers, it could not be used in English without the appearance of irreverence.

assistance,) speak on every one of these points with what we consider to be sufficient copiousness.

(5.) I say then<sup>1</sup> that every man, from the time of his birth till he arrives at old age, is continually tending to dryness; and for this reason the blood of children and infants is much moister than the blood of young men, and still more so than that of old men. And besides this it is much hotter; as Galen testifies in his Commentary on the "Aphorisms," in which he says that "the heat of children is greater in quantity than the heat of young men, and the heat of young men is more intense in quality."<sup>2</sup> And this also is evident from the

p. 20. force with which the natural processes, such as digestion and growth of body, are carried on in children. For this reason the blood of infants and children may be compared to must, in which the coction leading to perfect ripeness has not yet begun, nor the movement towards fermentation taken place; the blood of young men may be compared to must, which has already fermented and made a hissing noise, and has thrown out abundant vapours and its superfluous parts, like wine which is now still and quiet and arrived at its full strength; and as to the blood of old men, it may be compared to wine which has now lost its strength and is beginning to grow vapid and sour.

(6.) Now the Small-Pox arises when the blood putrefies and ferments, so that the superfluous vapours are thrown out of it, and it is changed from the blood of infants, which is like must, into the blood of young men, which is like wine perfectly p. 22. ripened: and the Small-Pox itself may be compared to the fermentation and the hissing noise which take place in must at that time. And this is the reason why children, especially males, rarely escape being seized with this disease, because it is impossible to prevent the blood's changing from this state into its second state, just as it is impossible to prevent must (whose nature it is to make a hissing noise and to ferment,) from changing into the state which happens to it after its making a hissing noise and its fermentation. And the temperament of an infant or child is seldom such that it

<sup>1</sup> Here begins the translation of the anonymous Greek Interpreter.

<sup>2</sup> See below, Note I.

is possible for its blood to be changed from the first state into the second by little and little, and orderly, and slowly, so that this fermentation and hissing noise should not show itself in the blood : for a temperament, to change thus gradually, should

p. 24. be cold and dry; whereas that of children is just the contrary, as is also their diet, seeing that the food of infants consists of milk; and as for children, although their food does not consist of milk, yet it is nearer to it than is that of other ages; there is also a greater mixture in their food, and more movement after it; for which reason it is seldom that a child escapes this disease. Then afterwards alterations take place in their condition according to their temperaments, regimen, and natural disposition, the air that surrounds them, and the state of the vascular system both as to quantity and quality, for in some individuals the blood flows quickly, in others slowly, in some it is abundant, in others deficient, in some it is very bad in quality, in others less deteriorated.

p. 26. (7.) As to young men, whereas their blood is already passed into the second state, its maturation is established, and the superfluous particles of moisture which necessarily cause putrefaction are now exhaled; hence it follows that this disease only happens to a few individuals among them, that is, to those whose vascular system abounds with too much moisture, or is corrupt in quality with a violent inflammation; or who in their childhood have had the Chicken-Pox,<sup>1</sup> whereby the transition of the blood from the first into the second state has not been perfected. It takes place also in those who have a slight heat, or whose moisture is not copious; and to those who had the Chicken-Pox<sup>2</sup> in their childhood, and are of a dry, lean habit of body, with slight and gentle heat; and who when they became young men, used a diet to strengthen and fatten their body, or a diet which corrupted their blood.

p. 28. (8.) And as for old men, the Small-Pox seldom happens to them, except in pestilential, putrid, and malignant constitutions of the air, in which this disease is chiefly prevalent.

<sup>1</sup> Literally, a "*light* (or *mild*) Small-Pox," εὐφορος Λοιμική in the Greek Translation.

<sup>2</sup> Literally, a "*weak* Small-Pox;" but the word is not the same as in the previous sentence:—perhaps, however, in both cases the words merely signify a very slight attack of Small-Pox.



For a putrid air, which has an undue proportion of heat and moisture, and also an inflamed air, promotes the eruption of this disease, by converting the spirit in the two ventricles of the heart to its own temperament, and then by means of the heart converting the whole of the blood in the arteries into a state of corruption like itself.<sup>1</sup>

(9.) Having thus sufficiently, though briefly and succinctly, treated of the causes of the Small-Pox, we shall now proceed to speak of the habits of body which are most disposed to this disease and to the Measles.

<sup>1</sup> This sentence affords a clear proof, that the ancients, while they considered the arteries to contain air, were also (at least after the time of Galen,) fully aware that blood was likewise to be found in them.

p. 30.

## CHAPTER II.

*A specification of those habits of body which are most disposed to the Small-Pox; and of the seasons in which these habits of body mostly abound.*

THE bodies most disposed to the Small-Pox are in general such as are moist, pale, and fleshy; the well-coloured also, and ruddy, as likewise the swarthy when they are loaded with flesh; those who are frequently attacked by acute and continued fevers, bleeding at the nose, inflammation of the eyes, and white and red pustules, and vesicles;<sup>1</sup> those that are very fond of sweet things, especially, dates, honey, figs, and grapes,<sup>2</sup> and all those kinds of sweets in which there is a thick and dense substance, as thick gruel,<sup>3</sup> and honey-cakes,<sup>4</sup> or a great quantity of wine and milk.

<sup>1</sup> The words *بثور* *Buthúr* and *تنفط* *Tanaffat*, are rendered *pustulae* and *vesiculae* by Channing, *pimples* and *boils* by Stack, *φλύκταιναι* and *ἐξανθήματα* by the Greek Translator. It is probable that neither of them is used by the Arabic writers in the strict and definite sense attached to the words *pustule* and *vesicle* by modern physicians.

<sup>2</sup> See below, Chap. v. § 5.

<sup>3</sup> The word *عصيدة* *Asidah* is rendered as in the text by Stack, and *ἀθήρη* by the Greek Translator; for the meaning of which term see Dioscorides, *De Mat. Med.* ii. 114, vol. i. p. 238, and Sprengel's Note, vol. ii. p. 456.

<sup>4</sup> The word *فالوزج* *Fálúzaj* (which is spelled in different ways, and is of Persian origin,) is left untranslated by Channing, and is rendered *μελίπηκτον* by the Greek Translator. It is said to have been a sort of cake made of starch, flour, honey, and water. See Castell, *Lex. Heptagl.* p. 3004; *Lex. Pers.* p. 89.

p. 32. (2.) Bodies that are lean, bilious, hot, and dry, are more disposed to the Measles<sup>1</sup> than to the Small-Pox; and if they are seized with the Small-Pox, the pustules are necessarily either few in number, distinct, and favorable, or, on the contrary, very bad, numerous, sterile, and dry, with putrefaction, and no maturation.

(3.) Lastly, those bodies that are lean and dry, and of a cold temperament, are neither disposed to the Small-Pox nor to the Measles;<sup>2</sup> and if they are seized with the Small-Pox, the pustules are few, favorable, moderate, mild, without danger, and with a moderate light fever from first to last, because such constitutions extinguish the disease.

(4.) I am now to mention the seasons of the year in which the Small-Pox is most prevalent; which are, the latter end of the autumn, and the beginning of the spring; and when in the summer there are great and frequent rains with continued south winds, and when the winter is warm, and the winds  
p. 34. southerly.

(5.) When the summer is excessively hot and dry, and the autumn is also hot and dry, and the rains come on very late, then the Measles quickly seize those who are disposed to them; that is, those who are of a hot, lean, and bilious habit of body.

(6.) But all these things admit of great differences by reason of the diversity of countries and dwellings, and occult dispositions in the air, which necessarily cause these diseases, and predispose bodies to them; so that they happen in other seasons besides these. And therefore it is necessary to use great diligence in the preservation from them, as soon as you see them begin to prevail among the people; as I shall mention in the sequel.

<sup>1</sup> Here follows in the Greek Translation the sort of note on the word *ἡσυχία* *Hasbah* or *εὐλογία*, which is given below, in Note A.

<sup>2</sup> The Greek Translator has *τοῖς δύο εἶδεσι τούτοις, τῇ τε Λοιμικῇ καὶ τῇ Εὐλογίᾳ*, using the word *Λοιμική* here in a *specific*, as above in a *generic* sense.

p. 36.

## CHAPTER III.

*On the symptoms which indicate the approaching eruption of the Small-Pox and Measles.*<sup>1</sup>

THE eruption of the Small-Pox is preceded<sup>2</sup> by a continued fever, pain in the back, itching in the nose, and terrors in sleep. These are the more peculiar symptoms of its approach, especially a pain in the back, with fever; then also a pricking which the patient feels all over his body; a fullness of the face, which at times goes and comes; an inflamed colour, and vehement redness in both the cheeks; a redness of both the eyes; a heaviness of the whole body; great uneasiness, the symptoms of which are stretching and yawning; a pain in the throat p. 38. and chest, with a slight difficulty in breathing, and cough; a dryness of the mouth, thick spittle, and hoarseness of the voice; pain and heaviness of the head; inquietude, distress of mind, nausea, and anxiety; (with this difference, that the inquietude, nausea, and anxiety are more frequent in the Measles than in the Small-Pox; while, on the other hand, the pain in the back is more peculiar to the Small-Pox than to the Measles;) heat of the whole body, an inflamed colour, and shining redness, and especially an intense redness of the gums.

(2.) When, therefore, you see these symptoms, or some of the worst of them, (such as the pain of the back, and the terrors in sleep, with the continued fever,) then you may be assured that the eruption of one or other of these diseases in the patient is nigh at hand; except that there is not in the Measles so much pain of the back as in the Small-Pox; nor in the Small-Pox so much anxiety and nausea as in the Measles, unless the

<sup>1</sup> Here again the Greek Translator has τῶν δύο εἰδῶν τῆς Λοιμικῆς.

<sup>2</sup> The symptoms preceding the eruption of the Small-Pox and Measles are mentioned below, *Almans.* § 1.

Small-Pox be of a bad sort ; and this shows that the Measles come from a very bilious blood.

p. 40. (3.) With respect to the safer kind of the Small-Pox, in this it is the quantity of the blood that is hurtful rather than its bad quality ; and hence arises the pain of the back, from the distension of the large vein and artery which are situated by the vertebræ of the spine.<sup>1</sup>

<sup>1</sup> There is a similar passage below, *Cont.* § 67.



p. 42.

## CHAPTER IV.

*A specification of the articles of the regimen or treatment of the Small-Pox in general.*

WE will now specify the articles of the regimen or treatment of the Small-Pox in general.

- The first of these is the preservation from the Small-Pox before the appearance of the symptoms of the disease, and the way to restrain it after the appearance of the symptoms. Chap. V. . . . . p. 37
- The second, of those things which accelerate the eruption and its appearance. Chap. VI. . . . . p. 47
- The third, of the care to be taken with regard to the eyes, eyelids, auditory canals, interior of the nose, throat, and joints, so that no putrescence may remain in them. Chap. VII. . . . . p. 51
- The fourth, of those things which hasten the ripening of the pustules. Chap. VIII. . . . . p. 56
- p. 44. The fifth, of the hastening of the drying of the pustules. Chap. IX. . . . . p. 57
- The sixth, of the taking away the eschars. Chap. X. p. 59
- The seventh, of those things which remove the marks of the Small-Pox. Chap. XI. . . . . p. 60
- The eighth, of the patient's food in the Small-Pox. Chap. XII. . . . . p. 64
- The ninth, of the preservation of the bowels from diarrhœa after the Small-pox. Chap. XIII. . . . . p. 67
- The tenth, of the signs of the mild and the fatal species of Small-Pox. Chap. XIV. . . . . p. 71
- Of all these articles, if GOD permit, I shall speak shortly and sufficiently.

p. 46.

## CHAPTER V.

*On the preservation from the Small-Pox before the appearance of the disease, and the way to hinder the multiplying of the pustules after their appearance.*

It is necessary that blood should be taken from children, youths, and young men who have never had the Small-Pox, or have had only the Chicken-Pox,<sup>1</sup> (especially if the state of the air, and the season, and the temperament of the individuals be such as we have mentioned above,) before they are seized with a fever, and the symptoms of the Small-Pox appear in them.<sup>2</sup> A vein may be opened in those who have reached the age of fourteen years; and cupping-glasses must be applied to those who are younger; and their bed-rooms should be kept cool.

(2.) Let their food be such as extinguishes heat; soup of yellow lentiles,<sup>3</sup> broth seasoned with the juice of unripe grapes,<sup>4</sup> acid minced meat,<sup>5</sup> kid's-foot jelly, the strained

<sup>1</sup> See above, Notes (<sup>1</sup>, <sup>2</sup>), p. 30.

<sup>2</sup> Compare below, *Almans.* § 2.

<sup>3</sup> عدسية 'Adasiyah is said by Ibn Jazlá (as quoted by Channing,) to have been made by boiling yellow lentiles in water till they were nearly dissolved, and then adding red vinegar, coriander, and salt.

<sup>4</sup> حصرمیه Hisrimiyah is said by Ibn Jazlá (as quoted by Channing,) to have been a sort of broth or soup made of the flesh of kid, lamb, or fowl, and seasoned with hisrim, which is the juice expressed from the grape while unripe, and is said by Russell (*Nat. Hist. of Aleppo*, vol. i. pp. 80, 81), to be preferred by the Turks to vinegar.

<sup>5</sup> سكباج Sicbāj consisted of different kinds of minced flesh-meat, dressed with vinegar and honey, or with acid syrup, to which were sometimes added raisins, a few figs, and chiches. (See Castell, *Lex. Heptagl.* p. 2523; *Lex. Pers.* p. 347.) Mr. Lane, in his translation of "The Thousand and One Nights," (vol. i. p. 435,) says it is "a dish composed of meat, wheat-flour, and vinegar;" and in another place, (vol. ii. p. 495,) that there are other kinds than that which he had before mentioned, and that vinegar enters into the composition of all.

liquor of *sicbáj*,<sup>1</sup> veal broth, broth<sup>2</sup> made of woodcocks, hens, and pheasants, and the flesh of these birds minced and dressed with the juice of unripe grapes. Their drink should be water cooled with snow, or pure spring water cold, with which their dwellings may also be sprinkled. Let them frequently eat acid pomegranates, and suck the inspissated juices<sup>3</sup> of acid and styptic fruits, as of pomegranates, warted-leaved rhubarb, acid juice of citrons, juice of unripe grapes, Syrian white mulberries, and the like. Where the temperament is hot, and there is much inflammation, the patient may take in the morning barley water carefully prepared, to which is added a fourth part of acid pomegranate juice. But if the heat be less, barley gruel<sup>4</sup> and sugar may be given in the morning, and vinegar, lentiles, and especially juice of unripe grapes, may be added to the food; for by means of these you will be able to thicken and cool the blood, so as to prevent the eruption breaking out. This regimen is of great service in all times of pestilence, for

<sup>1</sup> هلام *Hulám* is said by Ibn Jazlá (as quoted by Channing,) to be the cold liquor of the *Sicbáj*, with the fat strained off, and to be nearly the same as the *Mašús* mentioned below. See also Castell, *Lex. Heptagl.* p. 856.

<sup>2</sup> مصوص *Mašús* is said to have been much the same as the *Hulám* just mentioned, and signified particularly broth made with the flesh of birds. See Castell, *Lex. Heptagl.* p. 2114.

<sup>3</sup> The Arabic word is رُب *Rubb* or *Robb*, whence came the term *Rob*, which is often met with in old works on pharmacy, but is now nearly out of use. The difference between رُب *Rubb*, and شراب *Sharáb*, "Syrup," is explained by Avicenna, (v. i. § 6, vol. ii. p. 295, ed. Lat.; vol. ii. p. 211, ed. Arab.) to be, that a *rob* is simply inspissated juice alone, and a *syrup* is juice boiled down and thickened with sugar. See also Sontheimer, *Zusammengesetzte Heilmittel der Araber*, &c. (Freiburg, 8vo. 1845,) p. 108.

<sup>4</sup> Literally "roasted barley-meal." The Arabic word سويق *Sawík*, was the powder of seeds and berries, first roasted and afterwards ground in a mill. Lane, in the Notes to his Translation of the Arabian Nights, (vol. iii. p. 307,) says it is the meal of parched barley, and that the same name is also given to ptisan. It is rendered by the Greek translator ἄλφιτον, the meaning of which word may be learned from Galen, *De Aliment. Facult.* i. 11, vol. vi. p. 506; *Gloss. Hippocr.* vol. xix. p. 76. (See Channing's Notes, pp. 51, 162.)

p. 54. it diminishes the malignity of pestilential ulcers, and boils,<sup>1</sup> and prevents pleurisies, quinsies, and in general all distempers arising from yellow bile<sup>2</sup> and from blood.

(3.) In the middle of the day let the patient wash himself in cold water, and go into it, and swim about in it. He should abstain from new milk, wine, dates, honey, and in general from sweet things; and dishes made by a mixture of flesh, onions, oil, butter, and cheese;<sup>3</sup> from lamb, beef,<sup>4</sup> locusts,<sup>5</sup> young birds, high-seasoned things, and hot seeds. When the season is pestilential and malignant, or the temperament is hot and moist and liable to putrefaction, or hot and dry and liable to inflammation, together with this regimen the patient must take some of the remedies which we are about to describe. To those who are of a hot, dry, inflammable temperament give those garden herbs which are cooling, moist, and extinguish heat, such as purslain, Jew's mallow, strawberry blite, and also gourds, serpent cucumbers, cucumbers, and water melons.

p. 56. (4.) As to melons, especially sweet ones, they are entirely forbidden; and if the patient happen to take any, he should drink immediately after it the inspissated juices of some of the acid fruits. He may be allowed soft fish, and butter-milk.<sup>6</sup>

<sup>1</sup> See below, Note J.

<sup>2</sup> صفرا *Safra*, rendered by the Greek Translator, ξανθή χολή, *yellow bile*, to distinguish it from the μέλαινα χολή, or *black bile*, one of the four humours among the ancients.

<sup>3</sup> The Arabic word is اسفیدباج *Isfidabāj*. A somewhat different mode of preparing it is given by Ibn Jazlá in Channing's Note.

<sup>4</sup> The word دواب *Dawáb* is rendered *beef* by Stack, but is translated simply *jumenta* by Channing, and *bestiae* in the Latin Version of Avicenna, vol. i. p. 159. l. 7: 171. 17: 204. 40, ed. Arab., vol. i. pp. 368, 369, 354, ed. Lat.

<sup>5</sup> That locusts are eaten as a common article of food in the east is well known. The whole subject is exhausted by Bochart, in his *Hierozyicon*, vol. iii. p. 326, &c. ed. 1796.

<sup>6</sup> The Greek Translation has, ἐκ τοῦ ὀξώδους γάλακτος τὸ ὀξωδέστερον καὶ οἶον ἰχώρ ἐκκρινόμενον, τὸ παρὰ τοῦ Σοφοῦ τούτου ῥαῖπ (i.e. رايب *Raib*) ὀνομασθέν.

It does not seem quite certain whether the word رايب *Raib*, signifies *skim-milk* or *butter-milk*; Channing retains the Arabic word, Stack translates it as in the text. See below, Note (<sup>5</sup>), p. 40, and Note (<sup>2</sup>), p. 69.



(5.) With respect to those who are fat, fleshy, and of a white and red complexion, you may be content to let them eat such food as we first mentioned, consisting of any cooling and drying things. They should be restricted from labour, bathing, venery, walking, riding, exposure to the sun and dust, drinking  
 p. 58. of stagnant waters, and eating fruits or herbs that are blasted or mouldy. Let their bowels be kept open, when there is occasion for it, with the juice of Damask plums<sup>1</sup> and sugar, and whey<sup>2</sup> and sugar. And let them abstain from figs and grapes; from the former, because they generate pustules,<sup>3</sup> and drive the superfluous parts to the surface of the skin; and from the latter, because they fill the blood with flatulent spirits, and render it liable to make a hissing noise, and to undergo fermentation. If the air be very malignant, putrid, and pestilential, their faces may be constantly bathed with sanders water and camphor, which (with GOD'S permission,) will have a good effect.<sup>4</sup>

(6.) As to sucking infants, if they are above five months old, and fat, fair, and ruddy, let them be cupped; and let the nurse be managed with regard to diet in the manner we have mentioned. And let those infants that are fed on bread have  
 p. 60. those things which we have mentioned in a proper quantity.

(7.) We will now mention those medicines which thicken and cool the blood, and check its putrefaction and ebullition.

(8.) These are checked by all acid things, such as vinegar, butter-milk water of extreme acidity,<sup>5</sup> (that is, the thin, bitter

<sup>1</sup> Literally "damask plum water," and so Channing in this place translates it: below, however, (p. 178,) he renders it "aqua, i.e. *succus vel decoctum*." Stack in both places translates it "juice;" and the Greek Translator, *χύλος*.

<sup>2</sup> Literally "cheese water:" Gr. Transl., *ὀρρὸν γάλακτος*.

<sup>3</sup> *بشور* *Buthúr*, rendered *φλύκταιναι* by the Greek Translator; "*pustulae*" by Channing; "*humours*," (apparently,) by Stack. See above, Note (1), p. 32.

<sup>4</sup> The latter part of this sentence is rather different from the Greek Translation, which is as follows: ἀπόματτε διώλου τὸ πρόσωπον διὰ ῥόδων σταλάγματος· ἀναδεύεσθαι δὲ ὀρόνια τοῖς ὀσφραντοῖς καὶ ὑγροῖς τούτοις, καὶ ἐπιτίθεσθαι ταῖς ῥίσιν. αὕτη μὲν ἡ πρόνοια καὶ ἡ ἐπιμέλεια πάνν ὠφέλιμός ἐστιν ἐν ταῖς λοιμικαῖς καὶ διεφθαρμέναις καταστάσεσι τῶν ἀέρων. καὶ ταῖς ἐπιεδημηκνίαις νόσοις, Θεοῦ συναντιλαμβανομένον.

<sup>5</sup> The Greek translation has, τὸ ὀξῶδες τοῦ γάλακτος τυφόμενον· ῥάϊπ δὲ (i.e.

*رايب* *Raib*) παρὰ τοῦ Σοφοῦ τῇ αὐτοῦ διαλέκτῳ ὀνομασθὲν, ὅταν καλῶς ἡλιασθῇ. See above, Note (6), p. 39.



water which floats upon butter-milk when it is exposed to the sun,) and the acid juice of citrons; and still more useful are those things which have an astringency joined to their acidity, such as the juice of unripe grapes, sumach, warted-leaved rhubarb, apples, quinces, and acid pomegranates; and those things which by their nature thicken the blood, such as jujubes, lentiles, cabbage, coriander, lettuce, poppy, endive, black night-shade, tabasheer,<sup>1</sup> the seeds of fleawort, and common camphor.

p. 62. (9.) The following is the description of a medicine which restrains the ebullition of the blood, and is useful against heat and inflammation of the liver, and effervescence of the yellow bile :—<sup>2</sup>

p. 66. [Form. 1.]<sup>3</sup> Take of Red Roses ground fine, ten drachms,  
 Tabasheer, twenty drachms,  
 Sumach,  
 Broad-leaved Dock Seed,  
 Lentiles peeled,  
 Barberries,  
 Purslain Seed,  
 White Lettuce Seed, of each five drachms,  
 White Sanders, two drachms and a half,  
 Common Camphor, one drachm ;

p. 68. Let the patient take three drachms of this powder every morning in an ounce of the inspissated acid juice of citrons, or the inspissated juice of warted-leaved rhubarb, or the inspissated juice of pomegranates, or the juice of unripe grapes, and the like.

(10.) Oxymel,<sup>4</sup> prepared with sugar in the following manner, is also useful :—

<sup>1</sup> طباشير *Tabāshir*, translated by Stack, “bambu-sugar;” but this is not correct, and the word *tabasheer* is now sufficiently familiar to most readers to allow of its being used in the text.

<sup>2</sup> See above, Note (2), p. 39.

<sup>3</sup> In this and in most of the other prescriptions there are some differences between the Arabic text and the Greek translation, which do not deserve to be particularly specified.

<sup>4</sup> سکنجبین *Sicanjabin*, derived from two Persian words, signifying *vinegar* and *honey*. It is rendered by the Greek Translator ὀξοσάκχαρ, which is more strictly accurate, as no *honey* is used in the following prescription.

[Form. 2.] Take of best red Vinegar, depurated, one part,

Rose Water, two parts;

Mix them both together, and macerate in them for three days—

Of Red Rose leaves dried, one ounce,

Pomegranate flowers, half an ounce,

Pomegranate peel, two ounces;

Then strain the liquor; afterwards boil it, and add to it, according to the original quantity of vinegar, twice or thrice as much white sugar candy;<sup>1</sup> boil it sufficiently, and use it.

p. 70. (11.) The following preparation will also be useful:—

[Form. 3.] Take of Roses,

Tabasheer, of each ten drachms,

White Sanders, three drachms,

Common Camphor, one drachm;

Knead them all together with the mucilage of Flea-wort seed, and make the mass into pills, or troches: of these at proper times three drachms may be given to drink in one ounce of the aforesaid oxymel.

(12.) Besides these the syrup of which the following is the description will be still more useful, and its virtue excels that of all the syrups which we have seen and tried; unless it be the syrup of pearls,<sup>2</sup> which the Indians prepare in a different manner known only to themselves; for the Indians say, that if any one drinks of the syrup of pearls, even though nine pus-

<sup>1</sup> طبرزد *Tabarzad*, a Persian word, rendered simply σάκχαρ by the Greek Translator, but meaning probably *white sugar candy*. See Ibn Baiṭar, vol. ii. p. 152.

<sup>2</sup> The Translator has here followed Channing and Stack, though there is reason to suspect that there is some error in the text. He has not been able to find the "*Syrup of Pearls*" mentioned in any other Arabic author, nor has Professor Wilson met with it among the Sanscrit writers; neither does the word درره *Durrah* occur among the medicinal substances enumerated by Avicenna and Ibn Baiṭar. The Greek Translator renders the word by δπωρά, which is the same word that he uses for فواكه *Fawāciḥ*, "fruits," in pp. 50. l. 1: 56. 3: 58. 1 (ed. Arab.); and a syrup with this title is mentioned by Avicenna, v. 1. § 6, vol. ii. pp. 298, 299, ed. Lat. vol. ii. pp. 215, 216, ed. Arab. See also Sontheimer, *Zusammengesetzte Heilmittel der Araber*, &c. pp. 121, 125.

tules have already come out on him, there will not appear a tenth. The mode of preparing it is as follows:—

- p. 72. [*Form. 4.*] Take of the best old Vinegar depurated, three pints,  
 Acid Pomegranate juice,  
 Acid Juice of Citrons,  
 Juice of unripe Grapes,  
 Juice of warted-leaved Rhubarb,  
 Expressed juice of Syrian white Mulberries,  
 Infusion of Sumach,  
 and of Berberies, of each one pint,  
 Expressed juice of Lettuce,  
 Expressed juice of Tarragon, of each one quarter of a pint,  
 Decoction of Jujubes,  
 Infusion of Lentiles, of each one pint and a half;

Mix them all together, add to them three pounds of sugar, and boil the whole; then take half a pound of tabasheer, and of common camphor, and put them into a clean mortar after they have been well pounded; pour upon them a little of this syrup, hot, and work them quickly with a pestle, until they are dissolved; then mix them with the whole; and continue stirring it from beginning to end, with a stick of open cane, or willow wood, (but cane is preferable,) after having thrown in tabasheer and common camphor, until they are perfectly united.

- p. 74. This may be used both before the symptoms of the Small-Pox appear, and also after their appearance, as we shall mention presently. It is likewise proper in all diseases connected with the blood and the yellow bile, in pestilential ulcers, boils, quinsies, and the like:—for it is useful, with GOD'S permission.

(13.) This may in general suffice concerning preservation from the Small-Pox before the coming on of the fever which is attended by the symptoms of it. And by this means the Small-Pox is entirely repelled from one who is in such a condition that it can be repelled: and whatever pustules do come out must needs be favorable and few in number. By this means also it is brought about that the change in the blood from the first state into the second should not be effected all

- p. 76. at once and in a short time, with ebullition and fermentation, which are accompanied by frightful and dangerous accidents, but by little and little, and in a long time, and gradually, by way of ripening, not putrefaction, and without

fevers that are either frightful, malignant, and dangerous, or else hurtful and without doubt painful.

(14.) But when the fever arises which is accompanied by the symptoms of the Small-Pox, this regimen is not to be used, except after much observation, inquiry, and caution. For a mistake here is very dangerous; and for this reason, because the blood, when it ferments, is inflated and increased, and Nature, according to the temperament of the patient, is endeavouring to expel all its superfluous parts to the surface or to the members of the body; if, then, the cooling and thickening which you intend does not bring back the blood to a cooler and thicker state than it was in before its ebullition, the ebullition will break out a second or third time; and thus it will happen that you will be acting against Nature, and disturbing her in her work. Nor is it possible for the ebullition, if it be vehement, to be checked but by remedies in which there is great danger, and which do in a manner greatly congeal and coagulate the blood, (such as opium, hemlock, a great quantity of the expressed juice of lettuce, black nightshade, and the like,) and by the constant and excessive use of the regimen which we have just mentioned. And the congelation of the blood and the extinction of the natural heat at the same time, from the excessive use of these remedies, is not safe. Besides, even if you do employ them to excess, you will not be able to extinguish the ebullition and to restrain the violence of the unnatural heat; for by this excess you at the same time depress the power which the natural heat has of resisting what is hostile to itself; and you extinguish this and the unnatural heat together. And this I here mention to you (a matter which some physicians pass over from ignorance, and some from avarice, that they alone may receive profit from it,) in order that *you* may not offend against Nature, as do they: by permission of the Almighty and glorious GOD.

(15.) When you perceive symptoms of the Small-Pox, and you see a distension of the body, frequent stretching, pain in the back, redness of the complexion and of the eyes, a very violent headache, a strong and full pulse, a shortness of breath,<sup>1</sup> a red and turbid urine, and the body hot to the touch, like

<sup>1</sup> The Greek Translation adds here, *καὶ τῇ ἡθῇ τῆς ψυχῆς χαλεπά.*



that of a man who has been in a bath; and when also the body is fleshy, and the patient's diet has been such as produces plenty of blood: then take from him a large quantity of blood, even until fainting comes on. It is best to take it from the basilic<sup>1</sup> vein, or from some of its branches; if this cannot be found, then from the inner<sup>1</sup> vein; and if this cannot be found, p. 82. then from the cephalic.<sup>2</sup> But when the basilic and its branches cannot be found, it is better to take the blood from the popliteal vein,<sup>3</sup> or the saphena;<sup>4</sup> because these draw the blood from the greater veins in the abdomen more than the cephalic does. When these symptoms do not run very high, although they are distinctly manifest, then take away less blood; and when they have but slight force, then draw but little blood; and afterwards proceed in the cure with extingvents, as I have already mentioned. When you find that by the use of extingvents the feverish heat is moderated, and the pulse and breathing are returned to their natural state, you should still continue to employ these remedies,—for by their means you will entirely drive away the ebullition of the Small-Pox.

(16.) In order more effectually to perform this extinction, p. 84. let the patient drink water made cold in snow to the highest degree, several times and at short intervals, so that he may be oppressed by it, and feel the coldness of it in his bowels. If, after this, he should continue to be feverish, and the heat should return, then let him drink it a second time, to the quantity of two or three pints or more, and within the space of half an hour: and if the heat should still return, and the stomach be full of water, make him vomit it up, and then give him some more. If the water finds a passage, either by sweat or by the urine, then you may be sure that the patient is in a fair way of being restored to health; but if you do not see that the water has found a passage, or you find that the heat is increased, and returns as it was at first, or even is more violent, then omit giving the cold water in large quantities at several

<sup>1</sup> See below, Note L.

<sup>2</sup> See below, Note K.

<sup>3</sup> Literally, *the ham*. The vein at this place is one of those enumerated by Albucasis as being sometimes opened in blood-letting. (*De Chirurg.* p. 460.)

<sup>4</sup> See below, Note M.



times, and have recourse to the other extingvents which I have described. And if you see them relieve the patient in the way I have mentioned, then persist in the use of them; if, however, you see that there arises any anxiety and inquietude after taking them, or that the anxiety and inquietude is altogether vehement and immoderate, then you may be sure that it is impossible to prevent the eruption of the Small-Pox or p. 86. Measles. You must, therefore, then quit this mode of treatment, and hasten to assist Nature in expelling and throwing out these superfluities, in the manner I shall describe in the following Chapter.

p. 88.

## CHAPTER VI.

*Of those things which accelerate the eruption of the Small-Pox.*

THE eruption of the Small-Pox and Measles is accelerated by well wrapping the patient up in clothes,<sup>1</sup> and rubbing his body, by keeping him in a room not very cold, and by sipping cold water, a little at a time, especially when the burning heat is very great; for cold water, when it is sipped a little at a time, provokes sweat, and assists the protrusion of the superfluous humours to the surface of the body. Let the patient put on a double shirt, with the upper border closely buttoned; and underneath let there be placed two small basins of boiling water, one before and the other behind him, so that the vapour may come to the whole body except the face; and the skin may be

p. 90. rarefied, and disposed to receive and evaporate the superfluous humours. For when the surface of the body is in this state, the patient is suffused with sweat, which is calculated to cool him and is very beneficial.<sup>2</sup> And by this management not only is the surface of the body rendered soft, but also the strength of the patient is preserved, so that in this state nothing is more beneficial. And this may be effected by well wrapping the patient up in clothes, rubbing his body, and exposing it to the steam of hot water in the manner we have mentioned: for both the laver and the bath<sup>3</sup> are injurious in this state, inas-

much as they overheat the superfluous humours, and depress the strength so much that a fainting fit comes on. And when this is the case, Nature is diverted from her work, and the

p. 92. patient is in danger, especially if the fit be violent and frequent; for nothing is a greater indication of the approach

<sup>1</sup> See below, *Almans*. § 3.

<sup>2</sup> The Translator has here followed Channing's interpretation (though not entirely satisfactory,) as giving a better sense than either Stack's or the Greek Translation.

<sup>3</sup> A description of the Eastern baths may be found in various books of travels, &c. See, among others, Russell's *Nat. Hist. of Aleppo*, vol. i. p. 131, &c.; Lane's *Modern Egyptians*, vol. ii. p. 35, &c.

of death, especially in this case, than violent and frequent fainting ; for it shows that Nature is (in a manner) routed, and retires, and contracts her power into the inner parts of the body ; and when this takes place, it will immediately be oppressed and extinguished by the superfluous humours. Likewise after the hot vapour has been used, it must not be suffered to cool upon the body, but is to be wiped off with cloths, and dried with great care and diligence.

(2.) This method is sufficient to facilitate the expulsion of the superfluous humours to the exterior, when Nature is not languid, nor the superfluous humours too thick and viscid, and difficult to be expelled. When, however, the outward fever is mild and slight, but anxiety and inquietude continue, and the expulsion of the Small-Pox is slow and difficult, and delayed beyond the fifth day, you will then have to use those medicines which promote the eruption. But this is to be done with  
 p. 94. great caution and attention, in the way that I have already mentioned,<sup>1</sup> when speaking of the conditions to be observed in giving extingents ; for the error here, even if it be not equally important with the other, is important nevertheless. And the way to be preserved from falling into error in this case is to be not too hasty in using these medicines, but to be content with the former regimen as long as there is any hope of your being able to do without them, and as long as you are<sup>2</sup> pretty certain that the fever is as slight in the inward parts of the body as it is in the outward. This you will easily know, if neither the pulse nor the respiration be too quick, full, or irregular, and if on feeling the chest it be not found hot in the highest degree ;  
 p. 96. and hence you may be sure that even if the force of the fever be doubly or trebly increased, it will not prove fatal to the patient, on account of the vehemence of its heat ; of which you may judge by comparing this with other fevers which you have seen in the same patient or in persons of a similar temperament and in a like degree of heat, who have entirely recovered.

(3.) These extinguishing remedies are also to be used when you see, that, as soon as any of the pustules come out and appear

<sup>1</sup> See above, Chap. v.

<sup>2</sup> The Translator has here followed the reading proposed by Channing in his note, in preference to that which he has introduced into his text.

in the skin, the patient finds himself easier after it, and his pulse and breathing are relieved in proportion; but if you see that the eruption and appearance of the pustules goes on slowly and with difficulty, you must in this case avoid all very extinguishing medicines, for to use them would be acting contrary to Nature, and hindering her from throwing out the superfluous humours upon the skin. And when there follows, upon the use of extingvents, any anxiety and inquietude which were not present before, and especially if there be a palpitation of the heart, then you may be sure that you have committed an error. You must, therefore, immediately take all possible pains to soften the skin, in the way I have mentioned; and give to drink from time to time warm water, either alone, or that in which there have been first boiled the seeds of sweet fennel and smallage, and others of the same kind to be hereafter mentioned, which facilitate the eruption of the Small-Pox, according as you see the heat to be less or more inflamed, and as the patient is able to bear it; regard being also had to the sluggishness of the Small-Pox, and the slowness of the pustules in coming out.

(4.) The following is an easy, gentle mode of treatment, which will not excite too much heat, and will facilitate the eruption of the pustules:—

[Form. 5.] Take yellow Figs, to the number of thirty,  
Of Raisins stoned, twenty drachms;

Pour upon them three pints of water, and let them boil gently until they are nearly dissolved: give the patient to drink half a pint of this decoction, at three several times; then cover him up with clothes, and expose him to hot vapour, in the manner we have before mentioned.

(5.) The following preparation is more efficacious:—

p. 100. [Form. 6.] Take of the aforesaid Decoction, four ounces,  
Of the Decoction of Sweet Fennel Seed and Smallage, two ounces;  
Give it to the patient to drink, in the way we have mentioned.

(6.) The following is still more efficacious:—

[Form. 7.] Take of Sweet Fennel Seed,  
Smallage Seed, of each ten drachms;  
Boil them in the aforesaid decoction until the water is red, then strain it, and give the patient to drink three ounces of it.

(7.) The following composition is very beneficial and useful at several times :—

- p. 102. [Form. 8.]<sup>1</sup> Take of Red Roses, four drachms,  
 Peeled Lentiles, nine drachms,  
 Yellow Figs, to the number of ten,  
 Of Gum Tragacanth, three drachms,  
 White Raisins, stoned, ten drachms,  
 Lac, cleared from its stalks and washed, three drachms,  
 Sweet Fennel Seed,  
 Smallage Seed, of each five drachms;

Boil all these in two pints of water until it is reduced to one pint and a half; and give the patient half a pint of it, with half a scruple of saffron, two or three times, as may be necessary.<sup>2</sup>

- p. 104. (8.) We shall now speak of those parts of the body of which it is necessary to take care.

<sup>1</sup> Two very similar formulae are given by Synesius, *De Febr.* capp. 9, 10. pp. 294, 296. See also below, Form. 21.

<sup>2</sup> See below, Note N.



p. 106.

## CHAPTER VII.

*Of the care to be taken of the throat, eyes, and those parts of which it is necessary to take care upon the appearance of the symptoms of the Small-Pox.*

As soon as the symptoms of the Small-Pox appear, we must take especial care of the eyes, then of the throat, and afterwards of the nose, ears, and joints, in the way I am about to describe. And besides these parts sometimes it will be necessary for us to extend our care to the soles of the feet, and the palms of the hands; for occasionally violent pains arise in these parts from the eruption of the Small-Pox in them being difficult on account of the hardness of the skin.

(2.) As soon as the symptoms of the Small-Pox appear, drop rose-water into the eyes from time to time; and wash the face with cold water several times in the day, and sprinkle the eyes with the same. For if the disease be favorable, and the  
 p. 108. pustules few in number, you will by this mode of treatment prevent their breaking out in the eyes. This indeed is to be done for greater caution; for when the Small-Pox is favorable, and the matter of the disease is scanty, it seldom happens that any pustules break out in the eyes. But when you see that the ebullition is vehement, and the pustules numerous in the beginning of the eruption, with itching of the eye-lids and redness of the white of the eyes, some places of which are redder than others; in this case pustules will certainly break out there unless very strong measures be adopted; and therefore you should immediately drop into the eyes several times in the day rose-water, in which sumach has been macerated.<sup>1</sup> It will be still more efficacious to make a collyrium of galls in rose-water, and drop some of it into the eyes; or to drop into them some  
 p. 110. of the juice of the pulp of the acid pomegranate, first chewed, or squeezed in a cloth. Then wash the eye-lids

<sup>1</sup> See below, *Almans.* § 4.

with a collyrium<sup>1</sup> composed of red horn poppy, the juice of unripe grapes, rusot, aloe, and acacia, of each one part, and a tenth part of saffron; and if you also drop some of this collyrium into the eyes, it will be useful at this time.

(3.) But if you see that the matter of the disease is violent, and the eruption very copious, so that you conclude that pustules will certainly break out in the eyes, because you see excessive redness in some parts of the tunica sclerotica, with a protuberance of the eye itself, and you find that when you have dropped into it some of the remedies I have prescribed, it does not altogether remove that redness, but only lessens it for a time, after which it returns more violently than before, or at least continues in the same state as it was before you began this treatment; you must not in this case proceed any longer in this method, but, instead of these things and the like, drop into the eyes a little Nabathæan caviare in which there is no vinegar, nor any other acid.

(4.) [The pustules which break out in the tunica sclerotica do not injure the vision;]<sup>2</sup> but those which come out in the cornea obstruct the sight, and are to be cured, according to the degree of their thickness or thinness, by means of such strongly dissolving medicines as we are about to mention; which indeed are sometimes successful, and sometimes not, according as the matter is more or less thick, or the body more or less hard or aged. But if one large pustule breaks out in the tunica uvea,<sup>3</sup> then rub cuhl<sup>4</sup> in rose-water, and drop it into the

<sup>1</sup> The Arabic word is شيف *Shiáf*, whence comes the name *Sief* found in old pharmaceutical works.

<sup>2</sup> These words have been supplied by Channing from the Greek translation, and probably made part of the Arabic text originally, though they are not now to be found in the only MS. that has hitherto been used. The Greek term ὁ ἐπιπεφυκῶς χιτῶν, *tunica adnata*, is explained to mean the *tunica conjunctiva*, which is probably in most cases correct; here, however, it would rather seem to signify the *tunica sclerotica*. See Note and Index Verborum to the Oxford edition of Theophilus, *De Corp. Hum. Fabr.*

<sup>3</sup> The Arabic word is سواف *Sawáf*, which is rendered ῥαγοειδής by the Greek Translator, "tunica uvea" by Stack, and "tunica rhagoides" by Channing, but which the Translator has not been able to find in this sense in any other Arabic writer or Lexicon.

<sup>4</sup> See below, Note O.

eye several times during the day, and put over it a compress and bandage; or else drop into it some of the collyrium<sup>1</sup> p. 118. above mentioned, after taking out the saffron and adding one part of hæmatite, that there may not happen any great prominence. And these things are what ought to be known concerning the eyes in this place.

(5.) Care is next to be taken of the throat and mouth, in order that no pustules may break out in them which may distress the patient, or hinder his breathing: for it often happens that in the bad kinds of Small-Pox obstinate and violent suffocations come on; and when this is the case, there is no hope of the patient's recovery. For which reason, as soon as the symptoms of the Small-Pox begin to appear, the patient should gargle his mouth with acid pomegranate juice, or an infusion of sumach, or the inspissated juice of white mulberries, or with some of those things which we have mentioned in the chapter on extinguent<sup>2</sup>; or, if nothing else is ready at hand, with pure cold water, and that very often, in order that there may either be no eruption at all in the throat and mouth, or that what there is may be but slight. And, therefore, you should strengthen these parts, in order that they may not be at- p. 120. tacked by numerous pustules, giving rise to suffocation; and be quick and diligent in applying this cure, when, besides the symptoms of the Small-Pox, there is a hoarseness of voice, straitness in breathing and about the fauces, and pain in the throat. And if you see these symptoms to be very violent, then take away blood from the cephalic vein, and that even after the whole eruption is over. And if the patient finds anything in his mouth or throat which hurts him, and there is not much heat there, neither are his bowels too loose, then let him lick by degrees butter mixed with white sugar-candy; but if there be any heat and inflammation there, then give him a linctus<sup>3</sup> of the mucilage of fleawort seed, peeled almonds, and white sugar-candy thus prepared:—

<sup>1</sup> شياف *Shiáf*. See above, Note (1), p. 52.

<sup>2</sup> See Chap. v. § 2.

<sup>3</sup> The Arabic word is لعوق *La'úk*, whence is derived the name *Lohoc*, or *Looch*, to be found in old pharmaceutical works.

- p. 122. [Form 9.] Take of Sweet Almonds peeled, one part,  
 Gourd Seed, two parts,  
 White Sugar Candy, three parts,  
 Mucilage of Fleawort Seed, a sufficient quantity ;  
 Make it into a linctus.<sup>1</sup>

If the bowels be relaxed let the linctus be made of gum Arabic, peeled almonds, the seed of serpent cucumber, and wheat-starch, mixed up with mucilage of quince seeds.

(6.) In the next place we must take care of the joints, for there often comes out upon these a number of very bad pustules, which corrupt them to such a degree that the bones, ligaments, and tendons lie bare. Hasten, therefore, as soon as you see any symptoms of the Small-Pox, and especially if they are violent and excessive, and the pustules filled with fluid, hasten to attend to the joints, and bathe them with sanders, red horn poppy, Armenian bole, roses, common camphor, vinegar, and rose-water ; but in the bathing do not go much beyond the joints. If the pustules that come out are very large, then open them at once, and let out the matter ; and do not put off this operation, for delay is very dangerous.

(7.) After this you should take care of the nose and the ear, that there may not be in them a great quantity of pustules ; for this is hurtful to the patient ; and an eruption in the internal part of the ear is clearly dangerous. Apply, therefore, to the nose daily warm oil of roses with common camphor dissolved in it : and drop into the inner ear warm red vinegar, mixed with a collyrium<sup>2</sup> of red horn poppy, or rusot, and then put in a piece of cotton ; and let this be done two or three times a day.

(8.) Lastly, if a severe pain arises in the soles of the feet,<sup>3</sup> then take care to anoint them with tepid oil, and foment them with hot water and cotton. If this does not abate the pain, nor facilitate the eruption of the pustules, then beat up peeled sesamum with milk ; anoint with it, bind it on with a cloth, and so leave it upon the part all night ; then bathe the foot in warm water, and repeat the same again. Or bruise

<sup>1</sup> See above, Note (3), p. 53.

<sup>2</sup> شِيَاْف *Shiáf*. See above, Note (1), p. 52.

<sup>3</sup> See below, *Divis.* § 10.

dates with butter, and apply them ; or anoint with the lees of oil of ben :<sup>1</sup> for these and the like things soften and relax the skin, and thus facilitate the eruption of the pustules, and lessen the pain.

<sup>1</sup> The reading here is doubtful, as the word is written corruptly in the Leyden MS., and the Greek Translator has *σησάμων*, which is followed by Stack.



p. 128.

## CHAPTER VIII.

*Of those things which ripen the pustules.*

WHEN, after their eruption is completed, you observe that the pustules tend too slowly to maturation, and that the state of the patient has been benefited by the eruption, and that his breathing and pulse are also favorable, and that he is free from inquietude and anxiety; then it will be necessary to assist the maturation of the pustules. But if, together with a backwardness of ripening after their eruption, you perceive the pustules to be hard and warty, and the state of the patient to be not at all improved, or if his illness is increased, then you may be sure that the Small-Pox is mortal: in which case you need not aim at effecting their maturation, for they are of that kind which cannot be ripened.

(2.) The maturation of the Small-Pox, when it is curable, is to be effected by fomenting the body with the steam of hot water, or of a decoction of chamomile, violets, melilot, marsh-mallows, and bran of wheat, either separate or mixed together in two basins, as we have mentioned<sup>1</sup> above, when we were treating of the mode of facilitating the eruption of the Small-Pox. And if the patient finds relief at this time from the fomentation, you may abstain from those fumigations which are commonly employed for drying up the pustules, until they are ripe, and capable of bearing those things which are necessary for drying them up; of which we are now going to speak.

<sup>1</sup> See Chap. vi. § 1.

p. 132.

## CHAPTER IX.

*Of those things which dry the pustules.*

ALL those pustules that are very large should be pricked; and the fluid that drops from them be soaked up with a soft clean rag in which there is nothing that may hurt or excoriate the patient.<sup>1</sup> And at the same time let fumigations be made with dried rose leaves, or myrtle leaves, or sanders, or the leaves of the lily,<sup>2</sup> or the tamarisk; roses being more suitable in summer, and the tamarisk in winter.

(2.) The Small-Pox sometimes abounds with too much moisture. When this is the case, order the patient to sleep upon a mattress of thin texture stuffed with pounded roses,<sup>3</sup> or rice meal, or millet meal. If the patient's body be excoriated, put p. 134. under him the fresh leaves of the lily,<sup>2</sup> and besprinkle him with an aromatic powder, roses, and myrtle; and if any part be ulcerated, then sprinkle it with the red aromatic powder composed of aloe, frankincense, sarcocol, and dragon's blood. When the pustules break, either spontaneously or from the abundance of fluid contained in them, and are slow in drying up, then treat them with salt in this manner: take one ounce of oil of sesamum, and mix with it two drachms of Andarene salt,<sup>4</sup> pounded like cuhl,<sup>5</sup> and the same quantity of alum.

<sup>1</sup> See below, *Almans.* § 5.

<sup>2</sup> In both these passages Channing reads سوس *Sús*, in the Arabic text, which signifies *liquorice*, though he renders the word by *Iris* in his Latin translation: it is therefore most probable that he has confounded سوس *Sús*, with سوسن *Súsan*. The Greek Translator has *ῥιινόφυλλον* in the former place, and *κρίνον* in the latter. It was from this word that the ancient city of Susa derived its name; σοῦσον γὰρ εἶναι τῇ Ἑλλήνων φωνῇ τὸ κρίνον. (Athenaeus, *Deipnos.* xii. 8, p. 513.) Hence also came the ointment called σοῦσινον, mentioned by Dioscorides (*De Mater. Med.* i. 62), Athenaeus, (*Deipnos.* xv. 39, p. 689,) and others.

<sup>3</sup> See below, *Cont.* § 4.

<sup>4</sup> See below, Note P.

<sup>5</sup> See below, Note O.

With this liniment anoint the body, avoiding those parts which are excoriated and ulcerated,—for it must not be applied to those places, as it would pain them extremely. Let it remain p. 136. on the patient for the space of an hour, and then let him wash himself with a decoction of emblic myrobalans, the galls found on the white tamarisk, myrtle leaves, and pomegranate peels. If the desiccation be effected by these means, it is well; but if not, take of white Susian bole,<sup>1</sup> or any sort of white bole, (only do not take any red bole,) and mix with it about a tenth part of Andarene salt, and a tenth part of alum. Make this into a liniment, and apply it; let it remain on for an hour or two, and then wash it off.

(3.) Next will follow the mode of taking away the eschars and dry scabs.

<sup>1</sup> See below, Note Q.

p. 138:

## CHAPTER X.

*Of those things which take away the dry scabs and eschars.*<sup>1</sup>

WHEN the desiccation of the pustules is effected, and scabs and dry eschars still remain upon the body, examine them well, and upon those that are thin and perfectly dried up, and under which there is no moisture, drop warm oil of sesamum every now and then, until they are softened and fall off; except, however, those which are on the face, for these are to be dressed with oil of pistachio.<sup>2</sup> As for the larger sort which resemble eschars, if you see any moisture remaining in them, cut them off gently and remove them, without any application of oil. And if the places from which the eschars have been removed contain but little moisture, you may soak it up with soft cotton rag, as I have already said;<sup>3</sup> but if they contain much, p. 140. then besprinkle them with a little of the red aromatic powder,<sup>4</sup> especially if they begin to lessen and sink in; and with alum and salt, if they are even with the surface of the body, and do not sink in: then wait until a new eschar is formed on them. If there be still any moisture, then repeat the same treatment; and if there be no moisture, then anoint the scabs with oil, that they may be softened and fall off.

(2.) Next will follow a discourse on the mode of destroying the marks of the Small-Pox.

<sup>1</sup> See below, *Almans.* § 6.

<sup>2</sup> See below, *Cont.* § 7.

<sup>3</sup> See above, Chap. ix. § 1.

<sup>4</sup> See above, Chap. ix. § 2.

p. 142.

## CHAPTER XI.

*Of those things which remove the marks of the Small-Pox.*

THE marks of the Small-Pox are of two sorts; viz. either in the eye, or on the rest of the body.

I. (2.) In the eye the part on which the Small-Pox broke out is covered with an opaque whiteness, as we have already mentioned.<sup>1</sup> When this happens in the eyes of children, of those, namely, who are of a moist constitution of body, and tender skin, it is the more easily deterged.

(3.) Now, the medicines which deterge the eye and take off the whiteness, are, sal prunella (?), Andarene salt, sal ammoniac, bastard sponge,<sup>2</sup> glass-gall (?),<sup>3</sup> the sea-crab, the dungs of sparrows, swallows, starlings, mice, and crocodiles, the common sweet flag, ebony, greater celandine, coral, tutty, hæmatite, verdigris, Arabian sugar,<sup>4</sup> the dregs of vinegar burnt, the sediment of urine, myrrh, juniper resin, olive gum, bitter almond gum, the milky juice of wild lettuce, glass, the dung of bats, and musk.<sup>5</sup> It will be best to use these when the patient is just come out of the bath, or after holding his head over the steam of hot water; and it is right to make use of mild medicines alone, nay, the mildest of these, especially in soft and moist bodies.

p. 148. (4.) The description of a mild medicine which removes the white specks from the eye:—

[Form. 10.] Take of Sarcocol,  
White Sugar Candy;  
Sprinkle the powder in the eye.

<sup>1</sup> See above, Chap. VII. § 4.

<sup>2</sup> See below, Note R.

<sup>3</sup> See below, Note S.

<sup>4</sup> See below, Note T.

<sup>5</sup> This list of drugs may be compared with that in Avicenna, iii. 3. 2. § 18. vol. i. p. 547. ed. Lat., vol. i. p. 342. ed. Arab. See also Rhazes, *Almans.* ix. 16, 18.



## (5.) Another more efficacious :—

[*Form. 11.*] Take of Bastard Sponge,  
Sarcocol,  
Sugar;  
Sprinkle the powder in the eye.

## (6.) Another still more efficacious :—

[*Form. 12.*] Take of Sal Prunella (?),  
Bastard Sponge,  
Glass-gall (?),  
Sarcocol,  
Sugar;  
Sprinkle the powder in the eye.

## (7.) Another still more efficacious :—

[*Form. 13.*] Take of Verdigris, ten drachms,  
Gum Sagapenum,  
Gum Ammoniacum,  
Sarcocol, of each two drachms and a half,  
p. 150. Bastard Sponge,  
Glass-gall (?),  
Sal Prunella (?), of each three drachms ;

Then take of common Sweet Flag,

Greater Celandine, of each ten drachms ;

Boil them in ten times their weight of water, until the decoction becomes thick ; then dissolve the gums in it, and knead the rest together, and make the whole into an ophthalmic collyrium.

As occasion may arise, rub some of this paste with water in an ebony mortar,<sup>1</sup> so that the mixture may be thick ; then put some of it on a style, and apply it frequently to the part affected.

p. 152. Both before and after the operation let the eye be several times licked with the tongue ;<sup>2</sup> and afterwards sprinkle it with the milder sort of aromatic powder. But be sure to look carefully and frequently into the eye ; and if it be painful and red, then omit this treatment for some days, and afterwards repeat it ; for it is a very efficacious mode of cure.

II. (8.) As to the medicines which remove the marks of the

<sup>1</sup> The Translator has here followed Channing's version, though the passage is certainly corrupt, as is allowed by Channing himself. Stack's translation is very different.

<sup>2</sup> See below, Note U.

Small-Pox from the face and the rest of the body, they are these :—white litharge, dried reed roots, rotten bones, bastard sponge, coral,<sup>1</sup> sarcocol, almonds, birthwort, the ben-nut, the seeds of radish, melon, and rocket, and the meal of beans, rice, lupines, and kidney beans : let the patient be anointed with these in rice water, or barley water.

(9.) The description of a liniment which removes the marks of the Small-Pox :—

[Form. 14.] Take of the Meal of common Chick Peas,  
                     Bean Meal, of each three drachms,  
                     Melon Seed, five drachms,  
                     White Litharge, two drachms,  
 p. 154.            Reed Roots dried, three drachms ;

Pound all of them together in barley-water ; then anoint the patient several times successively after he has held his head over the steam of hot water, or after coming out of the bath. Then wash him in a bath made of a decoction of melon rinds, dried violets, bran, and common chick peas pounded ; rub him well, and then apply the liniment a second time.

(10.) The description of another liniment more efficacious than the former :—

[Form. 15.] Take of the meal of Beans resembling lupines, five drachms,  
 p. 156.            Bitter Almonds,  
                     Sweet Costus,  
                     Rocket Seed,  
                     Radish Seed, of each two drachms and a half ;  
 Use the liniment as we have directed.

(11.) Another liniment still more efficacious :—

[Form. 16.] Take of Bitter Almonds, peeled, five drachms,  
                     Radish Seed,  
                     Rocket Seed,  
                     Costus,

<sup>1</sup> Channing has in the text **فسد** *Fasad*, which appears to be a typographical error for **بسد** *Bassad*, as he translates the word *corallium*. The Greek Translator has *κοστρόριζον*, and therefore probably read **قسط** *Kust* in his Arabic MS., which is very similar in appearance to both the other words, and is not unlikely to be the true reading, as *coral* is not found in any of the following prescriptions, whereas *Costus* (which, unless it be mentioned here, is omitted entirely in the present list,) occurs in Formm. 15 and 16.

Long Birthwort, of each two drachms and a half,  
Sal Prunella (?), three drachms,  
Pepper, one drachm and a half;

Use them as we have directed; and anoint the parts with radish water, or with what we have before prescribed.

(12.) These, therefore, are the medicines which remove the marks and scars of the Small-Pox: and in order to efface the pock-holes, and render them even with the surface of the body, let the patient endeavour to grow fat and fleshy, and use the bath frequently, and have his body well rubbed.

(13.) We will now speak of what ought to be given to a patient in the Small-Pox by way of food, and of the medicines to be used in the treatment of him.

p. 160.

## CHAPTER XII.

*Of the patient's food in the Small-Pox.*<sup>1</sup>

To a patient in the Small-Pox it is necessary to give to drink barley water prepared in the same manner and with the same art as that which is usually given to persons in acute diseases. If the fever be moderate and mild, and the bowels somewhat costive, it must be sweetened with white sugar-candy; but if the heat of the fever be intense, and the bowels relaxed, then pour to it half its quantity of acid pomegranate juice, pounded with the seeds, but avoiding the pulp and inward thin tunicles, for these are aperient. If the patient be also restless and cannot sleep, add to the peeled barley used in preparing the barley water about half the quantity of poppy. But if the  
 p. 162. bowels be very loose, then take equal parts of peeled barley, of dry seeds of acid pomegranate, and poppy. But if it be necessary to bind the bowels, then instead of peeled barley take parched barley meal previously prepared with the meal of parched pomegranate seeds; boil these in the same  
 p. 164. manner as barley water is made, and let the patient drink of this, as he would of barley water, either alone, or mixed with tabasheer and gum Arabic, if a looseness of the bowels should make it necessary, or with the medicines which we shall describe anon. And barley water, mixed with acid pomegranate juice is very useful in the Small-Pox, and more especially in Measles. And also the juice of the gourd, of the Indian melon, and of the serpent cucumber, and the mucilage of fleawort seed, and the like, which make a mild phlegm and easy to be spit up; these, I say, are more useful in the Measles than in the Small-Pox, unless it be in those sorts of Small-Pox which are accompanied with extreme malignity, intense heat from the fever, and want of sleep.

<sup>1</sup> See below, *Almans.* § 7.

(2.) But in those cases of the Small-Pox which are accompanied with fever wherein there is not so violent an inflammation, the things above mentioned and others of the like kind render them much slower, and protract the length of the disease; so that you must use them, or not, as occasion shall require. For since the Small-Pox arises in most cases from heat and putrefaction acting upon moisture, those things are more suitable, which have a drying and thickening power together with a cooling power, such as water of pomegranates, juice of unripe grapes, and the like; but since the Measles arise from a vehement ebullition of the bile in the blood, those things are most salutary, which, together with a cooling power, have a moistening power also, in order that the corrupted blood may be tempered and corrected by their means. For the blood of a person in the Measles, is like stagnant water, which has been long putrid, and which, having lost its sweetness by the action of the sun, has contracted a vicious acrimony; but which, when it is mixed with rain water or running sweet water, recovers its former wholesomeness.

(3.) Moreover, in the Small-Pox the meal of parched barley is useful when it is washed and taken with sugar or in pomegranate water, or in julep,<sup>1</sup> according as may be required by the loose or costive state of the patient's bowels, as likewise the greater or less ebullition of heat: except that barley water is lighter for him to take in the Small-Pox, easier to swallow, and more beneficial to his throat and chest. So that you must act according to circumstances, after you have been apprised that barley water is more suitable for persons in the Measles than in the Small-Pox, unless it be of a bad sort, in the manner we have mentioned.

(4.) Peeled lentiles are likewise useful in the Small-Pox, when a food is prepared of them with the water of acid pomegranates, or with vinegar: as is also the parched meal of lentiles, when it is taken in cold water. You should know also that the drinking cold water is more serviceable to a patient in the Measles than in the Small-Pox, as being safer,

<sup>1</sup> جلاب *Julab*, whence comes the Greek Ζουλάπιον, the Latin *Julapium*, the English *Julep*, &c. is properly a Persian word, and signifies *Rose-water*. See Castell, *Lex. Heptagl.* p. 548.



and of a more certain effect. However, when you see the Small-Pox attended with violent inflammation, and quickness or intermission of the pulse and respiration, then make use of extinguishing medicines in proportion to the symptoms ; if they are less urgent, employ few, and if very urgent, then give many. But do not allow the patient to eat young birds until the pulse and respiration have returned to their natural state ; nor till the pustules are dried up, and the scabs fallen off.

(5.) Next will follow the discourse on relaxing the bowels and confining them in the Small-Pox.

p. 172.

## CHAPTER XIII.

*Of the regulating the patient's bowels in the Small-Pox.*<sup>1</sup>

THE bowels are generally relaxed in the Small-Pox and Measles towards their decline, and especially in the Measles; for which reason, after these diseases have passed their crisis,

p. 174. everything must be avoided which opens the bowels, even if they should be confined. But if the bowels are relaxed,

then you should from the first abstain from opening medicines, although it be necessary to employ them in the beginning of these two diseases, and before the crisis is passed. For it is sometimes necessary to open the bowels in the Small-Pox, either because of the excess of heat and headache, or in order to ease Nature of her load, and to lessen the morbid matter, when you have reason to think it over-abundant. And this will be the case when you find the body, both before and after the bloodletting, neither weakened nor wasted, but on the contrary bloated and full, with a paleness of colour, or but little of redness, and a fluctuation in the pulse. For sometimes in such a state it is not necessary to take away blood, but to evacuate from the body the superabundant moisture; and that

p. 176. especially when the aforesaid symptoms are very plain and

evident, and the body is troubled with boils from the sluggishness of the fever, and is destitute of a red colour. In this state one of the best things is a decoction of yellow or chebule myrobalans alone, when it is drunk with white sugar-candy, and the water of an acid pomegranate bruised with its pulp, to which may be added one or two more pomegranates if there be occasion. For it is the property of these two medicines (especially pomegranate water,) to diminish the superabundant moisture of the body, together with part of the bile, without exciting any heat, and to leave nothing behind them in the bowels. And these are some of the best things that can happen in this stage of the disease.

<sup>1</sup> See below, *Almans.* § 8.

p. 178. (2.) But in the Measles, give the water of damask plums, or the plums themselves, fresh gathered, and macerated in julep, with sugar added. But avoid the medicine called *taranjubín*,<sup>1</sup> which is as prejudicial in the Measles as honey is in the Small-Pox, both on account of the surfeit which it occasions, and also because it increases the nausea and anxiety of the patient. In like manner you should carefully avoid giving them to drink milk and violets, for both of these will also increase the nausea and anxiety in those who already feel any.

(3.) Now whereas the first and most necessary remedy in the Small-Pox is to draw blood when it is too much in  
p. 180. quantity, and there is no hope of checking its ebullition by extingents; (but it is necessary to take some away, as well for relieving Nature, as for abating the fullness of the blood-vessels, and their swelling and distension from the too great quantity of their contents, which must otherwise be productive of very bad consequences, especially when the blood is heated to that degree that the exhalation is too great;) in like manner in the beginning of the Measles it is right to draw off some of the bile, when you see it to be over-abundant, and then to pursue what remains of it by extingents. Now the sign of an excessive redundancy of the bile is the violence of the inflammation, and anxiety, together with the discharge of the same bile both by vomit and stool, and a bitter taste in the mouth. But if the quantity of the bile be not excessive, and yet there is anxiety and thirst and vehement heat, without  
p. 182. any discharge of bile either by vomit or stool, though its quantity, I say, be not excessive, we may judge it to be of a bad quality in proportion to the violence of the inflammation and anxiety,

(4.) And this is what you ought to know concerning the regulating the discharges of the bowels in the beginning of these two diseases. Now when the bowels are relaxed, give nothing laxative; for in either of these diseases the patient will be in danger from the excessive looseness of the bowels, if he drinks anything which increases their discharge. When,

<sup>1</sup> **ترنجبین** *Taranjubín*, a Persian compound word, signifying *moist* (or *dew*) *honey*. (See Castell, *Lex. Pers.* p. 180.) It here probably means the manna of the

**حاج** *Háj*, or *Camel's thorn* (*Alhagi Maurorum*, Tournef.).

therefore, the bowels are relaxed, give the patient barley gruel to drink, instead of barley water; and, if it be necessary, boil with the barley gruel the parched meal of pomegranate seeds; and if, notwithstanding, the looseness still continues, then mix in his drink gum<sup>1</sup> Arabic and tabasheer, in this manner:—

p. 184. [Form. 17.] Take of Gum Arabic, two drachms,  
Tabasheer, one drachm;

Pound them as small as cuhl, and sprinkle the powder into four ounces of barley gruel, and give it to the patient to drink, if his bowels be much relaxed.

And give him also to drink, about an hour before the barley gruel, some of this medicine which I am going to describe; and then give him barley gruel.

The following is the description of it:—

[Form. 18.] Take of Red Roses ground fine,  
Tabasheer,  
Broad-leaved Dock Seed,  
Sumach,  
Barberries, of each equal parts,  
Gum Arabic,  
Lemnian Earth,  
Poppy Rinds,  
Pomegranate Flowers, of each half the quantity;

Give the patient to drink three drachms of these in one ounce of the inspissated juice of green and acid quinces.

p. 186. (5.) But if the looseness still continues, and the patient is weakened by it, let him drink sour butter-milk,<sup>2</sup> from which the butter has been carefully removed, with the best sort of biscuits, and a little gum Arabic. Lastly, there often comes on a dysentery,<sup>3</sup> and when this is the case the mode of treatment

<sup>1</sup> The word صمغ *Samag*, gum, when used without any distinguishing epithet, signifies gum Arabic. See Ibn Baïtâr, vol. ii. p. 133.

<sup>2</sup> The Greek Translator has πρόσφερε τὸ ῥάϊπ (i.e. رايب *Raib*), τουτίστι τὸ ἰχωρῶδες τοῦ δξύνου γάλακτος. See above, Note (6) p. 39.

<sup>3</sup> The word سحج *Sahj*, means excoriation of the intestines and dysentery. The exact passage referred to by Rhazes is not quite clear. It is possible that it may be *Almans*. ix. 72 (71), but this does not seem likely, as that chapter is headed خلفة *Chalfah*, not سحج *Sahj*, which is rendered in the Latin version *Fluxus ventris*.

must be taken from the place where we have treated of that subject.

(6.) And now we will speak of the mild and the fatal species of the Small-Pox and the Measles.



p. 188.

## CHAPTER XIV.

*Of the fatal and the mild species of Small-Pox and Measles.*<sup>1</sup>

THE Small-Pox and Measles are of the number of acute and hot diseases, and therefore they have many things in common with them, with respect to the symptoms which indicate the disease to be mild or fatal. Now the chief prognostic signs in those who recover are, a freedom of respiration, soundness of mind, appetite for food, lightness of motion, a good state of the pulse, the patient's confident opinion respecting the event of his own illness, a convenient posture in bed, and but little tossing about and inquietude of body. Hence a judgment

p. 190. may be formed of the bad signs, some of which we have briefly but correctly mentioned in the book called 'Al-Mansûrî.'<sup>2</sup>

(2.) The circumstances which peculiarly regard the Small-Pox and Measles are the following. When the pustules of the Small-Pox are white, large, distinct, few in number, and easy in coming out, and the fever is without much violence and heat, or distress and anxiety; and when the patient's heat and distress and anxiety diminish upon the very first eruption, and entirely cease after the eruption is completed; that sort is the most curable and least dangerous. To these the next in goodness are those that are white and large, though they may be very numerous and close together, if the eruption has been easy, and has relieved the patient from his anxiety and heat, as we have already mentioned.

p. 192. (3.) But when the appearance of the pustules is brought about with difficulty, and the patient is not relieved upon their eruption, they are a bad sort; although there is not so much reason to be afraid if the patient's condition be unfavorable during their appearance, as if it continues so afterwards. But

<sup>1</sup> See below, *Almans*, § 9.

<sup>2</sup> An account of this work is given below, together with a translation of the chapter on the Small-Pox and Measles. The Greek Translator has ἐν τῷ συντάγματι ἡμῶν τῷ ὅλῳ.

there is a bad and fatal sort of the white and large pustules, viz. those which become confluent and spread, so that many of them unite and occupy large spaces of the body, or become like broad circles, and in colour resemble fat.

(4.) As to those white pustules which are very small, close to each other, hard, warty, and containing no fluid, they are of a bad kind, and their badness is in proportion to the degree of difficulty in their ripening. And if the patient be not relieved upon their eruption, but his condition continues unfavorable after it is finished, it is a mortal sign.<sup>1</sup>

p. 194. (5.) And as to those which are of a greenish, or violet, or black colour, they are all of a bad and fatal kind; and when, besides, a swooning<sup>2</sup> and palpitation of the heart come on, they are worse and still more fatal. And when the fever increases after the appearance of the pustules, it is a bad sign; but if it is lessened on their appearance, that is a good sign. Doubled pustules indicate an abundance of the matter of the disease, and if they are of the curable sort, they portend recovery;<sup>3</sup> but if they are of the mortal kind, they portend death.

(6.) The safest kind of Measles is that where the redness is not very deep; but the pale or tawny coloured are bad; and the green and violet coloured are both mortal. When either the Small-Pox or Measles sink in suddenly after they have begun to come out, and then the patient is seized with p. 196. anxiety, and a swooning comes on, it is a sign of speedy death, unless they break out afresh.

(7.) When the pustules appear on the first day that the patient is feverish, they will hasten their progress and be of quicker motion; if they appear on the third day, the eruption will advance moderately; but if the first appearance is delayed beyond the fourth day, the eruption will be completed dully and slowly. When the eruption breaks out on the good critical

<sup>1</sup> See below, *Cont.* § 5.

<sup>2</sup> The Greek Translator renders the word غشي *gashyon*, here by *vavriáw*, but both Stack and Channing consider the meaning in the text to be more probably correct in this place, though the word certainly signifies *nausea* in several other passages.

<sup>3</sup> The Translator is inclined to suspect some error in the Arabic text in this place, and has accordingly followed Stack and the Greek translation in preference to Channing.

days,<sup>1</sup> it is a salutary sign, especially if the patient is relieved at the end of it; and so on the contrary.

(8.) When the pustules begin to be confluent and to spread, and the anxiety is very great, and the abdomen is inflated, then death is near at hand.

(9.) When the smaller sort of pustules, which contain no fluid, break, and at the same time a delirium comes on, then the patient is near his end.

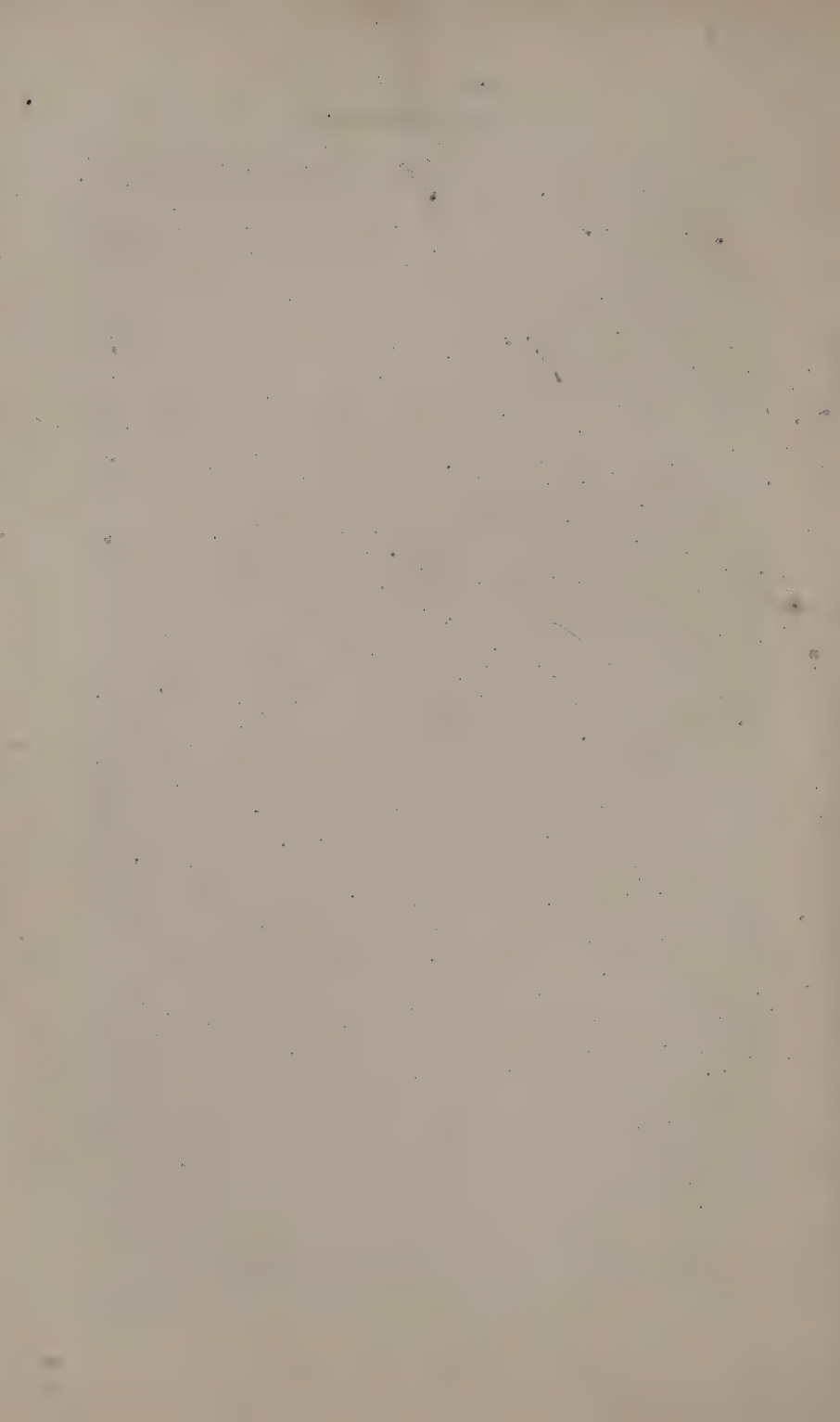
(10.) When the Small-Pox and Measles first appear, and afterwards sink in again, and there comes on at the same time anxiety and delirium, this is a fatal sign, whatever their colour may be; but this is seldom the case with the white pustules, and those which ripen, and contain fluid quickly.

(11.) When towards the end of the Small-Pox there is a great perturbation of the humours, and the patient is seized with a very violent pain in the leg, or hand, or any other limb, or the pustules turn to a green or black colour, and thereupon he becomes weaker than he was before, and the weakness still increases with the increase of the pain, or the limb is deeply coloured; these are signs of death.

(12.) But if, nevertheless, the patient's strength increases, he will recover, but the limb will mortify. And if you scarify that limb quite at the beginning of the pain, if the patient grows stronger after it, you will do him great service, and the limb will thereby be preserved from mortification. But in a case like this nothing cooling is to be applied to the limb, but it may either be scarified, or plunged into hot water, when you see that the state of the patient is able to bear it.

(13.) Now, therefore, as we have gone over all the articles which were proposed concerning the mode of treating this disease, and of preservation from it, we will here break off the thread of our discourse; and to HIM Who hath given us understanding to accomplish the work be praise and glory without end, even as HE is most worthy and deserving thereof.

<sup>1</sup> See below, Note V.



كتاب المنصوري \*

LIBER AD ALMANSOREM.





## TRANSLATOR'S INTRODUCTION.

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THE كتاب المنصوري *Cetábu-l-Mansúrí*, or work dedicated to Al-Mansúr, (commonly called "Almansor," or "Liber ad Almansorem,") was certainly written before the "Treatise on the Small-Pox and Measles,"<sup>1</sup> and probably after the "Continens." It is composed on somewhat the same plan as the works of Paulus Aegineta, Haly Abbas, Avicenna, &c., and was designed by the author for a complete body, or rather compendium, of Physic; where what had been said confusedly in the "Continens" is much better methodized under proper heads, and reduced into a regular system.<sup>2</sup> It consists of ten books, of which the first treats of Anatomy and Physiology, and is said by Freind to be taken chiefly from Hippocrates, Galen, and Oribasius *Collecta Medic.* lib. xxiv., xxv.

The second book, on Temperaments, comes from Hippocrates *De Humor.*, Galen *De Temperam.*, Oribasius *Collecta Medic.* lib. v., Aëtius, lib. iv., and Paulus Aegineta, lib. i.

The third book, on Food and Simple Medicines, is taken from Hippocrates *De Diaeta*, Galen *De Alim.* and *De Simpl. Medicam. Temper. ac Facult.*, Aëtius, lib. i.-iii., Oribasius *Synops.* lib. ii., iv., and *Collecta Medic.* lib. i.-v., xi.-xiii., xv., and Paulus Aegineta, lib. i.

The fourth book, on the Means of preserving Health, comes from Galen *De Sanit. Tuenda*, Paulus Aegineta, lib. i., and Aëtius, lib. iii.

The fifth book is on Skin Diseases and Cosmetics, and is taken from Galen *De Compos. Medicam. sec. Locos.*

The sixth book treats of the Diet of Persons on a Journey.

The seventh book is entirely surgical, and is taken from

<sup>1</sup> See above, Chap. xiv. § 1, p. 71.

<sup>2</sup> See Freind's *Hist. of Physic*, vol. ii. p. 46, &c.

Hippocrates, Paulus Aegineta, lib. vi., Oribasius *Synops.* lib. vii., and Aëtius, lib. xiv. and xv.

The eighth book, on Poisons, comes from Paulus Aegineta, lib. v.

The ninth book, on the Treatment of Diseases of all parts of the Body, is taken from Hippocrates *De Morbis*, Galen *De Locis Affect.*, *De Meth. Med.*, and *De Compos. Medicam. sec. Locos*, Aëtius, lib. vi.-xii., Oribasius *Synops.*, lib. viii., ix., and Paulus Aegineta, lib. iii., iv.

The tenth and last book treats of Fevers, and comes from Hippocrates *De Crisib.*, Galen *De Crisib.*, *De Febr. Different.*, *De Meth. Med.* lib. iv.-x., and *De Meth. Med. ad Glauc.* lib. i., Oribasius *Synops.* lib. vi., Aëtius, lib. v., and Paulus Aegineta, lib. vi.

From this sketch it will appear that the work is principally compiled by the author from the writings of his predecessors, and that its chief excellence is not so much the amount of original matter it contains, as its commodious form and arrangement. This was probably the great cause of its popularity during the middle ages, when the ninth book was so much in vogue for some hundred years that it was publicly read in the schools, and commented upon by the most learned professors.<sup>1</sup>

For a more particular account of the contents of this treatise the reader may consult the works of Freind, Haller, and Sprengel; the first of which writers has translated and inserted in his History the two following curious chapters.

*“What kind of Physician is to be made choice of and approved.”<sup>2</sup>*

“It is highly necessary to be considered in the first place, how, and in what manner the physician you intend to choose, has employed his time, and how he has spent it in his private studies. If he has been very industrious in a diligent perusal and examination of the books of the ancient physicians, and has carefully read and compared their writings, we may justly form to ourselves a good opinion of him. On the contrary, if

<sup>1</sup> Freind's *Hist. of Physic*, l. c.

<sup>2</sup> *Almans.* iv. 32.

we find he has spent the greatest part of his time in anything rather than in what we have mentioned; if he seems to be much delighted in music, drinking, and other ill habits; we can entertain no great opinion of him. But if it is evident he has been all along very studious, the next point to be considered is, his genius and sagacity, whether he has been very conversant with men able to dispute with and oppose him, and what just grounds we have to think he will ever arrive to the talents of inquiring into, as well as of curing, distempers: we ought to know in the next place, what time he has spent in the conversation of those persons we just now mentioned, and whether he has acquired by their means the art of judging of a distemper, as well as relieving it. It will be material moreover to observe, whether he well understands what he pretends to have studied, or no: if we find he does, the next inquiry will be, whether he has been used to attend the sick, and happy in the cure of them. We ought to be satisfied, whether he has practised in popular cities, where there are great numbers of patients, as well as of physicians; and if upon inquiry we find that he is well qualified as to both these particulars, we may safely pronounce him an able physician, and to be made choice of before many others. But if it should be found, he were failing in *one* of these qualifications, it were rather to be wished he were wanting in the practical part (I do not mean to be utterly unacquainted with at least some part of it,) than to know nothing at all of the learning of the ancients. For he that is well versed in, and has well digested, the writings of the ancient physicians, will with a little help of practice, easily attain to what others, who are wholly strangers to this branch of learning, can never be able to compass; those I mean who know little themselves, and owe all the little knowledge they have to the long conversation they have had with others, who have practised in places where both physicians and sick do abound. But if any pretender to letters sets up for a master, without having any learning himself; or, if he has some smattering, understands little of what he reads, or at least has not arrived to the use and understanding of his profession; such a one is not much to be relied upon, nor are his abilities to be confided in. Neither is it likely for him to become a proficient in his own way. For it is not possible for a man, though he lives to a great age, to

attain to this part of knowledge so considerable in itself, unless he treads in the track of the ancients; the extent of this science far exceeding the bounds of human life: and the same thing is not in this alone, but in many other professions. The authors who have improved this art are not a few, but they are not to be comprehended within the compass of a few years; a thousand writers perhaps for a thousand years have been improving this art, and profession: and he that industriously studies those authors, will, in the short period of life, find out as much, as if he had lived a thousand years himself, or employed those thousand years in the study of physic. But if the perusal of ancient authors comes once to be slighted, what can any single person find out, or what proportion can his personal abilities, though much superior to others, bear to the immense treasures of the ancients? In short, he that reads not the books of the learned physicians, nor understands something of the nature of diseases, even before he comes to visit, will, when he comes to attend the sick, either through ignorance or mistake, overlook the distemper, because he does not beforehand understand anything of it."

*"Of Impostors."*<sup>1</sup>

"There are so many little Arts used by Mountebanks and pretenders to physic, that an entire treatise, had I a mind to write one, would not contain them: but their impudence, and daring boldness is equal to the guilt and inward conviction they have of tormenting and putting persons to pain in their last hours, for no reason at all. Now some of them profess to cure the falling-sickness, and thereupon make an issue in the hinder part of the head, in form of a cross, and pretend to take something out of the opening, which they held all the while in their hands. Others give out, that they can draw snakes or lizards out of their patients' noses, which they seem to perform by putting up a pointed iron probe, with which they wound the nostril, until the blood comes: then they draw out the little artificial animal composed of liver, etc. Some are



confident, they can take out the white specks in the eye. Before they apply the instrument to that part, they put in a piece of fine rag into the eye, and taking it out with the instrument, pretend it is drawn immediately from the eye. Some again undertake to suck water out of the ear, which they fill with a tube from their mouth, and hold the other end to the ear; and so spurting the water out of their mouths, pretend it came from the ear. Others pretend to get out worms, which grow in the ear, or roots of the teeth. Others can extract frogs from the under part of the tongue; and by lancing make an incision, into which they clap in the frog, and so take it out. What shall I say of bones inserted into wounds and ulcers, which, after remaining there for some time, they take out again? Some, when they have taken out a stone from the bladder, persuade their patients, that still there's another left; they do this for this reason, to have it believed, that they have taken out another. Sometimes they probe the bladder, being altogether ignorant and uncertain, whether there be a stone or no. But if they don't find it, they pretend at least to take out one they have in readiness before, and show that to them. Sometimes they make an incision in the anus for the piles, and by repeating the operation often bring it to a fistula or an ulcer, when there was neither before. Some say they take phlegm, of a substance like unto glass, out of the penis or other part of the body, by the conveyance of a pipe, which they hold with water in their mouths. Some pretend that they can contract and collect all the floating humours of the body to one place by rubbing it with winter cherries; which causes a burning or inflammation; and then they expect to be rewarded, as if they cured the distemper; and after they have suppld the place with oil, the pain presently goes off. Some make their patients believe they have swallowed glass; so, taking a feather, which they force down the throat, they throw them into a vomiting, which brings up the stuff they themselves had put in with that very feather. Many things of this nature do they get out, which these impostors with great dexterity have put in, tending many times to the endangering the health of their patients, and often ending in the death of them. Such counterfeits could not pass with discerning men, but that they did not dream of

any fallacies, and made no doubt of the skill of those whom they employed: till at last when they suspect, or rather look more narrowly into their operations, the cheat is discovered. Therefore no wise men ought to trust their lives in their hands, nor take any more of their medicines, which have proved so fatal to many."

"This last description," observes Freind, "here given by Rhazes, plainly shows, how much *Quacks* have prevailed in all ages, and almost in the same instances: he has painted this set of men to the life, and had he lived in our days, he might have found subjects enough, who would have resembled the picture he has here drawn."

There has been some doubt as to the identity of the <sup>1</sup>Al-Mansúr to whom this work is dedicated. Fabricius<sup>2</sup> (perhaps on the authority of Leo Africanus,<sup>3</sup>) speaks of him as the Regent of Cordova, who died A. H. 392. (A. D. 1002.), nearly seventy years after the death of Rhazes; others have supposed him to have been the founder of Bagdad, who died A. H. 158. (A. D. 775.), probably about a hundred years before he was born. Neither is Ibn Chalicán correct when he says that he was the Samanian prince, Abú Salih Mansúr Ibn Nuh Ibn Nasr, who reigned from A. H. 350 to A. H. 365.<sup>4</sup> (A. D. 961-975.); as it seems tolerably certain that the person in question was Mansúr Ibn Ishak Ibn Ahmed Ibn Isma'il, prince of Chorásán.<sup>5</sup>

The Arabic text has never been published,<sup>6</sup> but the whole or part of it is to be found in MS. in the libraries at Madrid,<sup>7</sup> Dresden,<sup>8</sup> and Oxford.<sup>9</sup> It was translated into Latin by Gerardus Cremonensis, and several times published in the

<sup>1</sup> See below, Note W.

<sup>2</sup> *Biblioth. Graeca*, vol. xii. p. 692, ed. vet.

<sup>3</sup> *De Viris Illustr. ap. Arabes*, cap. 6.

<sup>4</sup> See Wüstenfeld, *Gesch. der Arab. Aerzte*, p. 43.

<sup>5</sup> See Casiri, *Biblioth. Arabico-Hisp. Escur.* vol. i. p. 261; Assemani, *Biblioth. Naniána*, vol. ii. p. 240.

<sup>6</sup> A single chapter (lib. ix. cap. 7.) is inserted, with a Latin Translation, by Reiske in his *Opusc. Med. ex Monument. Arab.* p. 70 &c.

<sup>7</sup> Casiri, *Biblioth. Arabico-Hisp. Escur.* vol. i. §§ 815-17, 853-55.

<sup>8</sup> Fleischer, *Catal. Cod. MSS. Orient. Biblioth. Dresd.* § 140.

<sup>9</sup> Nicoll and Pusey, *Catal. MSS. Arab. Biblioth. Bodl.* §§ 529, 577, 592.

fifteenth and sixteenth centuries together with the Author's other smaller works.<sup>1</sup>

1481. fol. Mediolani, per Leonardum Pachel et Uldericum Scinzzen-celler.<sup>2</sup>

Title: "Abubecri Rasis Filii Zachariae Tractatus X Medici. Ejusdem Liber Divisionum, et alii Tractatus," &c. &c.

1494. fol. Venetiis, per Joannem et Gregorium de Gregoriis.

Title: "Contenta in hoc Volumine. Liber Rasis ad Almansorem," &c. &c.

1497. fol. Venetiis, per Bonetum Locatellum Bergomensem.

Title: "Contenta in hoc Volumine. Liber Rasis ad Almansorem," &c. &c.

1500. fol. Venetiis.

A reprint of the preceding.

1510. 8vo. Lugduni, per Gilbertum de Villiers.

Title: "Opera parua Abubetri filii Zacharie filii Arasi que in hoc paruo volumīe cōtinentur sunt. Liber ad Almansorum decē tractatus cōtinens cum nōnullis additionibus interlinearibus Gerardi Cremonensis nusq̃: antea impressis," &c. &c.

1544. fol. Basiliae, per Henrichum Petrum.

Title: "Abubetri Rhazae Maomethi, . . . . . summi Medici Opera exquisi-tiora," &c. &c.

The following extract is translated from an Arabic MS. in the Bodleian Library at Oxford, (*Marsh*, 248.) written on oriental paper in the *neschi* character, and in general very legible and correct. It agrees for the most part with the Latin Translation: in those passages where it differs, as the Translator has not had an opportunity of consulting the MSS. at Madrid or Dresden, he has endeavoured to give the best sense in his power by following either the MS. or the Translation, whichever appeared to be the more correct.

<sup>1</sup> Further information respecting the MSS., translations, editions, &c. of this treatise may be found in Haller's *Biblioth. Medic. Pract.*, Wüstenfeld's *Gesch. der Arab. Aerzte*, and Choulant's *Handb. der Bücherkunde für die Aeltere Medicin*.

<sup>2</sup> The account of this and the three following editions is taken from Panzer's *Annales Typograph.*; and Hain's *Repertor. Bibliograph.*

## LIBER AD ALMANSOREM.

p. 203.

LIB. X. CAP. 18.

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### *On the Small-Pox and Measles.*

WHEN anybody (especially a child or young person,) is seized with an acute continued fever,<sup>1</sup> together with a pain in the back, itching in the nose, starting in sleep, heaviness of the head, redness in the cheeks and eyes, and a pricking all over the body, then you may be sure that the patient, will certainly have either the Measles or the Small-Pox shortly break out.

(2.) If therefore you are summoned to the patient before the disease breaks out, you should by all means cause him to lose blood<sup>2</sup> either by the lancet, or cupping-glasses; and give him to drink troches of camphor<sup>3</sup> in acid pomegranate juice. For food let him merely take barley water each morning and evening; or if his strength be much reduced, and he himself wishes for more food, let him have some peeled lentils prepared with vinegar, and a linctus composed of sugar and oil of almonds, together with whatever cooling herbs you may have at hand. For drink let him have the inspissated juices of acid, styptic fruits; or if the bowels be constipated, give him an infusion every day. By this regimen the eruption will either be altogether prevented, or, if it has already appeared, it will be but slight.

(3.) But if the patient is not seen until the eruption has

<sup>1</sup> Compare these symptoms with those enumerated above, Chap. III. § 1, and below, *Divis.* § 1.

<sup>2</sup> Compare above, Chap. v. § 1, &c.

<sup>3</sup> The Latin translation has *tabasheer* instead of *camphor*, and so has the Arabic MS. at the beginning of § 3. Probably Form. 1 or 4 is referred to, in which both *tabasheer* and *camphor* are used.



begun to come out,<sup>1</sup> you must not then bleed him, nor give him troches of tabasheer, but wrap his body up in clothes in order to provoke and keep up a perspiration, for by this means the eruption will be facilitated. But if you find it to be slow in coming out, and the patient is troubled with much swooning, and anxiety, with occasional delirium and palpitation of the heart, then you may let him drink several times a day a decoction composed of a handful of figs, raisins, peeled lentils, sweet fennel seed, and twigs of lac.

(4.) You should also drop into the eye<sup>2</sup> rose water in which sumach has been macerated, or the juice of the pulp of pomegranates. And let the patient drink cold water, mixed with a little vinegar; and let him wash his face, and gargle with it, to prevent the pustules breaking out in his nose, or eyes, or throat. But if any should come out in his eye, or ear, or throat, then let some cuhl be rubbed up in coriander juice, and dropped into it several times a day.

(5.) When the pustules are all come out, and ripened, let the patient<sup>3</sup> sleep upon willow leaves, or sprinkle pounded roses upon his bed. And when they are slow in drying up, and very large, with superabundant moisture, then bathe him with water of naphtha salt; and let a fire be lighted, and fumigations be made, in the winter with tamarisk, and in the summer with sanders, rose leaves, and myrtle leaves; and if the desiccation is still delayed, boil these, and put the patient into the water.

(6.) When<sup>4</sup> the desiccation of the pustules is effected, and foul scabs and dry eschars still remain upon the body, and are difficult to be removed, then anoint them with tepid oil on cotton several times a day, till they all fall off, and the patient recovers. And if it is necessary to remove the marks of the Small-Pox that remain, let them be frequently anointed with some of the medicines mentioned in the chapter on that subject,<sup>5</sup> and then let the patient go into the bath.

<sup>1</sup> See above, Chap. vi. § 1, &c., and below, *Divis.* § 2.

<sup>2</sup> See above, Chap. vii. § 1, &c., and below, *Divis.* §§ 5, 9.

<sup>3</sup> See above, Chap. ix. § 1, &c., and below, *Divis.* §§ 3, 4.

<sup>4</sup> See above, Chap. x. § 1, &c., and below, *Divis.* § 4.

<sup>5</sup> This last sentence is not found in the Arabic text: the chapter referred to is probably *Almans.* v. 27. See also above, Chap. xi.



(7.) He must also use a suitable diet.<sup>1</sup> If the Small-Pox and Measles break out, and blood has not been drawn, then let him take the juice of pomegranates, and troches of tabasheer, and all things of a cooling nature. But do not allow him to eat young birds until the scabs of the pustules are fallen off, and the fever and the heat have left the body.

p. 207. (8.) Be careful not to give him anything<sup>2</sup> which opens the bowels, after the Small-Pox or Measles has fully made its appearance; and if they are relaxed, let him drink barley gruel, with tabasheer, and gum Arabic, Armenian bole, and roses, as we have mentioned in the chapter<sup>3</sup> on Diarrhoea.

(9.) The worst kind of<sup>4</sup> Small-Pox is that in which the pustules are of a violet colour, small, hard, and slow in ripening; and in like manner the Measles which are of a violet colour are of a bad sort. When you see the Small-Pox and the Measles are difficult in coming out and in ripening, and the patient's fever and anxiety are not quieted nor alleviated, and there comes on, besides, a fainting and palpitation of the heart, the patient will surely die; but if the pustules are quick in coming out and in ripening, and the fever and heat are quickly alleviated, he will recover.

<sup>1</sup> See above, Chap. XII. § 1, &c., and below, *Divis.* § 10.

<sup>2</sup> See above, Chap. XIII. § 1, &c., and below, *Divis.* § 3.

<sup>3</sup> See above, p. 69, note (<sup>3</sup>). The word in the Arabic text in this place is

اسهال *Ishāl*.

<sup>4</sup> See above, Chap. XIV. § 1, &c., and below, *Divis.* § 8.

تقسيم العلل

DIVISIO MORBORUM.



## TRANSLATOR'S INTRODUCTION.

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THE work entitled *تقسيم العلل* *Taksímu-l-'ilal*, or *Division of Diseases*, (commonly called "Divisiones,") is much shorter than the "*Liber ad Almansorem*," and apparently written after it. It is a kind of manual of the symptoms and treatment of diseases, beginning (after the usual custom of similar works among the ancients,) with those affecting the head, and descending to those of the legs and feet. The Arabic text has never been printed, and the only MS. mentioned by Wüstenfeld is in the Nanian library at Venice.<sup>1</sup> It was translated into Latin by Gerardus Cremonensis, and published together with the *Liber ad Almansorem* and the other smaller works of Rhazes.

The following extract is translated from the Latin of Gerardus, as the Translator has not had any opportunity of making use of the Arabic MS. at Venice; for which reason the Latin version has been reprinted, (with a very few verbal alterations,) in order that the reader may be able to form a judgment of the general style and language of these medieval translations,<sup>2</sup> and may also have an opportunity of correcting any errors into which the English Translator may have fallen; for as this short chapter has been to him by far the most troublesome part of the whole work, so it is also the most unsatisfactory.<sup>3</sup>

<sup>1</sup> Assemani, *Catal. dei Codd. MSS. Orient. della Bibliot. Naniana*, vol. ii. p. 238.

<sup>2</sup> See below, Note X.

<sup>3</sup> Mr. Adams has kindly read over these few pages, and corrected several mistakes which the Translator had made.

## DIVISIO MORBORUM.

## CAP. 149.

*On the Small-Pox and Measles.*

THE premonitory symptoms of the Small-Pox are an acute continued fever, a violent pain in the back, itching in the nose, and starting in sleep; but if the fever be attended with more vehement heat, and greater anxiety, then the Measles may be expected.<sup>1</sup>

(2.) The proper treatment of the Small-Pox, when the symptoms are beginning to appear, is bloodletting, but not afterwards;<sup>2</sup> but observe, and if the patient is in good spirits about his illness, without any great anxiety, and the pustules have already begun to come out, then treat him with those things which hasten the eruption; and do not let him drink

p. 209. anything very cold, in order that the eruption of the pustules may not be stopped, and there may not come on any slowness and difficulty in bringing them out. But if you see the pustules are sluggish in coming out, then give him a decoction composed of figs, with twigs of lac, and a little saffron, in order to hasten their eruption.<sup>3</sup>

(3.) When all the pustules are come out, you must next assist their maturation by proper regimen, and by steaming the body with the vapour of hot water, if they have not begun to ripen;<sup>4</sup> and let the patient be treated with the diet of those who have boils, and let him have for drink barley water, and the like, according to the violence of the febrile heat. Be

<sup>1</sup> See above, *Almans.* § 1, and below, *Cont.* § 6.

<sup>2</sup> See below, *Cont.* § 15.

<sup>3</sup> See above, *Almans.* §§ 2, 3.

<sup>4</sup> See above, *Almans.* §§ 5, 8, and below, *Cont.* §§ 2, 4.



## DIVISIO MORBORUM.

CAP. 149.

### *De Variolis et Morbillis.*

SIGNA generationis Variolarum sunt, febris acutae caliditatis conclusa,<sup>1</sup> et vehementia doloris dorsi, et pruritus nasi, et timor in somno. Si autem febris est vehementioris caliditatis, et angustia est major, tunc portenditur Morbillus.

(2.) Et cura Variolarum, cum incipiunt signa, est phlebotomia, sed postea non : sed attende, et si fuerit aeger bonus in parvi pendenda aegritudine, et non habuerit angustiam vehementem, et Variolae jam inceperint exire, tunc rege eum eis quae festinare faciunt exitum Variolarum : et non des ei in potu aliquid frigidum cum frigidity plurima, ut non stet exitus Variolarum, et superveniat ei tarditas et difficultas. Si autem videris Variolas pigri exitus, tunc da ei decoctionem ficuum cum virgis laccae et aliquantulum croci, ut festinare faciat exitum illarum.

(3.) Cum ergo exierint omnes, tunc adjuva eas ad maturandum cum regimine, et vaporatione cum vapore aquae, si non coeperint pervenire ad maturationem ; et rege eos regimine habentium apostemata calida, tribuendo in potu aquam hordei, et alia, secundum quantitatem vehementiae caliditatis. Et non multum intendas ad solvendum naturam,<sup>2</sup> et praecipue in Mor-

<sup>1</sup> "Febris conclusa" is the expression used above by Gerardus (*Almans.* § 1.) to express the words *حمى المطبقة* *Hummai-l-mutabbakah*, which have occurred before, (pp. 30, 36, 38, ed. Channing,) and are rendered by the Greek Translator *πυρετός συνεχής*.

<sup>2</sup> No doubt the Arabic word which Gerardus here, and also below, § 7, renders *naturam*, was *طبيعة* *Tabi'ah*, which signifies also *venter*. It has frequently been used in the latter sense throughout this volume, and this is evidently the meaning required in this place.

careful not to give him anything which opens the bowels, especially in the Measles, and towards the end of the disease; for a diarrhoea at this time may end fatally. When you ripen the pustules by steaming them with the vapour of hot water, then assist their drying up by fumigations with myrtle leaves, and rose leaves, and with the tamarisk; and boil these, and wash the pustules with the decoction, if their desiccation is delayed.

(4.) While<sup>1</sup> the desiccation is going on, if there are any pustules that are difficult to dry up, drop on them salt and water; and when their desiccation is completely effected, then p.210. drop on them tepid oil several times a day, until all the scabs fall off.

(5.) As soon as the symptoms of the Small-Pox appear,<sup>2</sup> you should drop into the eyes rose water in which has been macerated sumach and rue seed. When there comes on a redness of the white of the eye, and itching of the eyelids, or a white spot in the cornea; or if that does not happen, and you see but few pustules, then you will have need of this; but if you find that the itching of the eye is not assuaged, but on the contrary becomes more violent than before, then drop into it caviare and salt; and steam it with the vapour of hot water.

(6.) The Measles are more to be dreaded than the Small-Pox, except in the eye. You must, therefore, administer those things which draw off the bile with ease, and without heating; such as the water of damask plums, of a pomegranate bruised with its pulp, with sugar, barley water, the water of the Indian melon, of the water melon, and of the gourd, and the mucilage of flea-wort seed. But if you find the patient after this medicine suffers uneasiness and anxiety, and perhaps fainting, p.211. then let him sip cold water, and sit in it for a short time; and rub his body, and cover him up, until his inquietude is assuaged, and the Measles come out to the surface of the body; after which you may have recourse again to such remedies as extinguish the fever.

(7.) You should carefully watch the state of the bowels towards the end of the disease, that there may be nothing to

<sup>1</sup> See above, *Almans.* §§ 5, 6.

<sup>2</sup> See above, *Almans.* § 4, and below, *Cont.* § 3.

billo, et in fine rei suae : nam forsitan non salvabitur, habens ipsum a ventre in fine rei suae. Et quando tu facis vaporem et maturas, tunc adjuva ad exsiccandum eas cum suffumigatione foliorum myrti et foliorum rosarum, et fumo tamarisci, et decoque ista, et ablue eas cum aquis eorum, si tardatur earum exsiccatio.

(4.) Cum ergo exsiccantur, si remanet in eis aliquid difficilis exsiccationis, degutta desuper aquam et salem; et cum confirmatur earum exsiccatio, et completur, tunc degutta desuper oleum tepidum multotiens, donec cadant crustae omnes.

(5.) Et incipe, quando apparent Variolae, et signa earum, et distilla in oculos aquam rosarum, in qua infusum sit aliquid sumach, et seminis rutae. Et quando in albedine oculi accidit locus rubeus, et pruritus, aut albus in nigredine ejus; et si non accidit istud, et videris Variolas paucas, tunc indigebis hoc; quodsi inveneris pruritus, qui est in oculo, non sedari per illud, immo redditur fortior quam fuit, tunc distilla in eum ex almuri<sup>1</sup> et sale; et vapore ipsam aquam calidam.

(6.) Morbillus autem est majoris timoris quam Variolae, nisi in oculo. Intende ergo in illo cum eis quae educunt choleram cum facilitate absque calefactione; sicut aqua prunorum, et granati contriti cum suis interioribus, cum zuccaro, et aqua hordei, et aqua melonis Indi, et citrulli, et cucurbitae, et mucilagine psyllii. Si autem inveneris infirmo post hanc medicinam advenire tristitiam et angustiam, et fortasse cooperiet eum syn-copa, tunc fac eum sorbere aquam frigidam, et fac eum sedere in ea parum; et frica corpus ejus, et cooperi eum, donec sedetur quod in ipso est, et egrediatur Morbillus ad exteriora corporis; deinde redi cum exierit ad extinguendum.

(7.) Et serva naturam<sup>2</sup> in fine rei, ut non sit causa ad solu-

<sup>1</sup> The edition of 1544 has *muria*, but *almuri* (i. e. المري) is undoubtedly right. See above, Chap. VII. § 3.

<sup>2</sup> See above, p. 91, Note (2).

bring on a fatal diarrhoea;<sup>1</sup> and if you find in the patient a bloody exudation from the places of the eruption of the Measles, make him sit in a hip bath of cold water.

(8.) You should know that the Measles<sup>2</sup> which are of a deep red and violet colour are of a bad and fatal kind; and that the Small-Pox in which the pustules are yellow, hard, close together, confluent, numerous, and of a deep red or violet colour, and that kind which spreads like herpes, and gives the surface of the body the appearance of vibices, are all bad and mortal.

(9.) As soon as you see the symptoms of the Small-Pox,<sup>3</sup> you should order the patient to gargle his mouth with rose water, in order that the eruption which comes out in his throat may be lessened; and drop into his ear a collyrium of red horn poppy with vinegar and water, in order that the eruption which comes out in his ear may be lessened; and make  
p. 212. him snuff up into his nostrils oil of myrtle, in order that the eruption which comes out in his nose may be lessened; for when you have done this he is relieved from great suffering.

(10.) If he complains of a pungent pain in the soles of his feet,<sup>4</sup> and the palms of his hands, let him put them frequently into hot water. Do not allow him to eat young birds in either of these diseases<sup>5</sup> until the scabs of the pustules are fallen off, and the thirst and difficulty of breathing are gone. After the scabs are fallen off, the frequent use of the bath and a fattening regimen of the body will efface the pock-holes; and those medicines which eradicate tetters or blemishes in the skin, destroy the marks of the Small-Pox.

<sup>1</sup> See above, *Almans.* § 8, and below, *Cont.* § 2.

<sup>2</sup> See above, *Almans.* § 9, and below, *Cont.* § 1.

<sup>3</sup> See above, *Almans.* § 4, and below, *Cont.* §§ 3, 4.

<sup>4</sup> See above, Chap. VII. §§ 1, 8.

<sup>5</sup> See above, *Almans.* § 7.

tionem nequissimam; et si inveneris in infirmo resudationem sanguinis ex locis Morbilli, fac eum sedere in aqua frigida.


(8.) Et scias, quod est Morbillus malus, et rubeus et violaceus hujus aegritudinis, est malus et perniciosus: et Variolae citrinae, durae, propinquae, involutae, multae et rubeae vehementis rubedinis, et violaceae, et illae quae ambulant ut formica,<sup>1</sup> et quae faciunt superficiem corporis sicut spasmata, omnes malae sunt, et mortales.

(9.) Et oportet etiam, ut cum senseris Variolas, ut praecipias aegro gargarizare cum aqua rosarum, etiam ut minoretur quod egreditur in gutture suo; et effunde in aurem ejus sief<sup>2</sup> memithae<sup>3</sup> cum aceto et aqua, ut minoretur quod egreditur in aure ejus: et fac ipsum in naribus sugere oleum myrtinum, ut minoretur quod egreditur ex eis in naso; nam cum hoc feceris quiescit ex laesione magna.

(10.) Et si conqueritur de punctura in plantis pedum, et manuum, assiduet positionem eorum in aqua calida. Et non cibes eum in his duabus aegritudinibus pullis, donec cadant cortices, et recedat sitis, et malitia anhelitus. Postquam ergo ceciderint cortices, tunc assiduatio balnei et regimen impinguativum corporis implebunt foramina earum: et medicinae quae eradicant pannum,<sup>4</sup> delent vestigia earum.

<sup>1</sup> See Mr. Adams's Note on Paulus Aegineta, iv. 20. vol. ii. p. 65.

<sup>2</sup> See above, Note (1), p. 52.

<sup>3</sup> See Arabic Index, in  Mamithā.

<sup>4</sup> "Pannus notat maculam, vel naevum, in cute," &c. &c. See Blancardi *Lex. Med.* Rhazes has a chapter (*Almans.* v. 21.) "De illis quae delent Pannum."





كتاب الحاوي \*

LIBER CONTINENS.



## TRANSLATOR'S INTRODUCTION.

THE الحَوِي *Al-Háwí*, or *Comprehensive* book, commonly called *Continens*, is by far the largest of all the works of Rhazes : it is divided sometimes into twenty-five, sometimes into thirty-seven books, and fills two folio volumes. It seems to have been merely a sort of common-place book, in which he collected under different heads all that occurred to him worthy of notice in his own practice, together with the opinions of former writers ; and accordingly exhibits all the faults that such a work might be expected to contain. Sometimes it repeats the same matter in almost the same words, much is omitted that we might expect to find in it, and the whole is an undigested mass, without order or arrangement. It should however be stated that it was probably never intended for publication, (at least in its present state,) but was first published after the author's death, with many interpolations by the editors.<sup>1</sup> Notwithstanding these defects the "Continens" of Rhazes is universally admitted to be one of the most valuable and interesting medical works of antiquity, though it might at first sight appear to be one of the most repulsive. Haller, who confesses that even *he* was unable to get to the end of the more systematic "Canon" of Avicenna, read through the "Continens" without weariness or disgust, (*absque taedio*,)<sup>2</sup> and has given a fuller analysis of its contents than is to be found elsewhere.

No part of the Arabic text has ever been published, though MSS. are to be found in the Escorial Library<sup>3</sup> and in the Bodleian.<sup>4</sup> It was translated into Latin by Feragius, and has been several times published in that language. The following list of editions is made partly from personal inspection, and partly on the authority of Haller<sup>5</sup> and Choulant.<sup>6</sup>

<sup>1</sup> See below, Note Y.

<sup>2</sup> *Biblioth. Medic. Pract.* vol. i. p. 384.

<sup>3</sup> Casiri, *Biblioth. Arabico-Hisp. Escur.* vol. i. p. 257, &c. §§ 802-814, p. 290, §§ 849-851.

<sup>4</sup> Uri, *Catal. MSS. Orient. Biblioth. Bodl.* §§ 565, 607 (?), pp. 135, 142 (?); Nicoll and Pusey, *Catal. MSS. Arab. Biblioth. Bodl.* § 179, p. 161.

<sup>5</sup> *Biblioth. Medic. Pract.* vol. i. p. 371.

<sup>6</sup> *Handb. der Bücherk. für die Aeltere Medicin.*

1486. fol. 2 vols. Brixiae, per Jacobum Britannicum Brixianum.

Divided into twenty-five books: no title page: printed in black letter, with two columns in a page. The colophon is as follows: "Explicit Liber xxv. Elhauy, i. Continentis in Medicina, quem composuit Bubikir Zachariae Errasis Filius: traductus ex Arabico in Latinum per Magistrum Feragium Medicum Salerni, Jussu excellentissimi Regis Karoli, Glorise Gentis Christianae, Coronae Filiorum Baptismatis, et Luminis peritorum." This edition is said to be rare.

1500. fol. 2 vols. Venetiis, per Bonetum Locatellum.

In twenty-five books, like the preceding.

1506. fol. 2 vols. Venetiis, per Bonetum Locatellum Bergomensem Presbyterum.

In twenty-five books: printed in black letter, with two columns in a page. Title: "Liber Helchaui, id est Continens Artem Medicinæ et Dicta Predecessorum in hac Facultate emendatorum. Per clarissimum Artium ac Medicinæ Doctorem, Magistrum videlicet Hieronymum Salium Faventinum, Erroribus purgatus et ornatus, ut in Epistola ejusdem ad Lectorem a tergo hujus folii positi inspicitur." This edition is said to be rare.

1509. fol. 2 vols. Venetiis, per Bonetum Locatellum.

Haller, who compared this edition with that of A.D. 1500, speaks of them as follows:—"Duas editiones comparavi. In mea anni 1500 sunt libri viginti-quinque, eamque curavit Bonetus Locatellus Presbyter. Altera in Bibliotheca Gottingensi anni 1509 forma paulo minori prodiit, curante Paulo Suriano, qui prius dictus sit *Hieronymus* Surianus. Hic libri numerantur triginta-septem: res ipsa eadem est, neque plures libri hac editione continentur; ordo autem valde diversus est, ut modo mea anni 1500 editio plenior videatur modo nuperior altera. In ea sunt duo simplicium medicamentorum catalogi, alter capitum 765, qui plenior (?) meo est, cui capita sunt 827, et ordine alio; alter editioni 1509 proprius est, quo mea caret, simplicium medicamentorum 116, cui male titulus inscribitur *Antidotarius*. Paginae in tomo ii. duo habent initia, ut possit pro duobus tomis haberi." See also Channing's Preface, above, p. 16, Note (1).

1511. fol. 2 vols. Venetiis.

1542. fol. 2 vols. Venetiis.

These editions (which the Translator has never seen) are probably reprints of the edition of 1509.

The following extracts are translated from an Arabic MS. in the Bodleian Library, (*Marsh*, 156,) written by an oriental scribe in the *neschi* character, and generally tolerably legible. It differs frequently from the old Latin version, and in these instances the Translator has endeavoured to make the best sense in his power by comparing the parallel passages in the "Treatise on the Small-Pox," and the "Liber ad Almansorem." As, however, he has had no opportunity of consulting the MSS. in the Escorial, there are still several passages which he has been unable to correct.



(1.) Al-Yehúdí<sup>1</sup> says:—"When the pustules of the Small-Pox are small, close to each other, and of a greenish colour, the disease is fatal; but when they are large and distinct, it is curable."<sup>2</sup>

p. 214. (2.) He also says:—"When the pustules of the Small-Pox break out, do not treat the disease with refrigerant medicines, by which you may hinder the throwing out the superfluous humours, but let the patient take the seeds of sweet fennel and smallage, and sugar, in order that they may be soon brought out from the interior. And on the fourth day give him barley water and the decoction of jujubes and sugar. And if his bowels be confined, you may open them at the beginning of the disease with the water of taranjubín<sup>3</sup> and the like, but not towards the end, for then you should render them as much constipated as possible."<sup>4</sup>

(3.) He also says:—"Let the patient gargle and rince his mouth with sweet fennel water, and sugar, and a little saffron water, and let him suck pomegranates, in order that there may be no eruption in the mouth and throat. And make a collyrium with caviare, or with cuhl, in coriander juice, or camphor water, to prevent the pustules from coming out in the pupil."<sup>5</sup>

p. 215. (4.)<sup>6</sup> You must also take care of the inside of the nose, that there may be no eruption in it; you should there-

<sup>1</sup> See below, Note Z.

<sup>2</sup> See above, *Divis.* § 8, and below, § 6.

<sup>3</sup> See above, p. 68, Note (1).

<sup>4</sup> See above, *Divis.* §§ 3, 7, and below, § 20.

<sup>5</sup> See above, *Divis.* §§ 5, 9, and below, §§ 8, 9, 16.

<sup>6</sup> In the Arabic, to this section (and to several others,) is prefixed the word لي *Lí*, i. e. *to me*, or *mine*, (rendered *Dico* in the Latin version,) by which Rhazes meant

fore apply red horn poppy, or rusot, sanders, and vinegar, and let the patient frequently smell vinegar and water during the day, by which means he will recover.<sup>1</sup> If the bowels be relaxed towards the end of the disease, give the patient troches of broad-leaved dock, and let him eat woodcocks, with the seeds of pomegranates, and the juice of unripe grapes. If there is a pain in the throat, let the patient suck the inspissated juice of unripe grapes. After the seventh day sprinkle on him water with salt and a little saffron,<sup>2</sup> and afterwards roses, sanders, lentils, and a little common camphor; and give him to eat those things which are light, drying, and extinguent. And in the winter let a fire be lighted with tamarisk; and when the pustules are ripened let the patient sleep upon a mattress stuffed with the meal of rice, millet, barley, or beans; by which means they will quickly dry up.<sup>3</sup>

(5).<sup>4</sup> The pustules which come out after the fever are less dangerous than those which precede it.

(6.) The symptoms of the Measles are a hoarseness of the voice, redness of the cheeks, pain in the throat and chest, dryness of the tongue, pain and heaviness of the head, redness of the eyes, with a great flow of tears, nausea, and anxiety :  
 p. 216. when therefore you see these symptoms, the Measles are certainly about to appear.<sup>5</sup> And the Measles come out all at once, but the Small-Pox gradually. The Measles that are green or violet coloured are of a bad kind, especially if they sink in

to distinguish those parts of his work which are original from those which are extracted from former writers. This distinction will probably be sufficiently clear in the present translation, if the reader will remember that all those passages belong to Rhazes which are not printed with inverted commas as a quotation, and with the name of the author from whom they are extracted.

<sup>1</sup> See above, *Divis.* § 9.

<sup>2</sup> See above, *Divis.* § 4, and below, § 44.

<sup>3</sup> See above, Chap. ix. § 2, and below, §§ 17, 20.

<sup>4</sup> In the passages which follow, the order of the paragraphs in the Latin version differs from that in the Arabic MS. The nature of the work, consisting entirely of unconnected observations, renders this transposition of the less consequence, while it increases the difficulty of deciding which order is the true one. In this instance the Translator has followed the Latin version in preference to the Arabic MS., because it seemed unlikely that two passages so much alike as §§ 4 and 17, should have been placed by the author in such complete juxtaposition. (See MS. Arab. p. 87, l. 17.)—This sentence occurs below, § 81.

<sup>5</sup> See above, *Divis.* § 1, and below, § 8.

suddenly, for then a swooning will come on, and the patient will soon die. In the Small-Pox, when the pustules are black, dry, containing no fluid, hard, and warty, swooning comes on, and the disease is fatal.<sup>1</sup> When the pustules are very moist, let fumigations be made with myrtle leaves; and afterwards, in order to remove the marks of them, wash the scars with powdered reed roots in water, or litharge.<sup>2</sup>

(7.) Oil of pistachio also entirely removes the marks of the Small-Pox.<sup>3</sup>

p. 217. (8.) At-Tabarí<sup>4</sup> says:—"When there is redness of the eyes and face, with fever, heaviness of the body and head, itching in the nostrils, and there comes on sneezing, inquietude, and anxiety, all this indicates an attack of Small-Pox.<sup>5</sup> You should drop into the eye cuhl rubbed up and dissolved in rain water, or in coriander juice, and squeeze into the eye the juice of pomegranate pulp, or vinegar with white naphtha.<sup>6</sup>

[Form. 19.] Take of [washed Lac,]<sup>7</sup>

Peeled Lentiles, of each six drachms,

Gum Tragacanth, three drachms;

Boil them in half a pint of water, until only the half of that quantity remains; and give it the patient to drink.

This hastens the eruption of the pustules: and let the food be lentiles peeled and roasted, with pomegranate juice, and styptic fruits."

(9.) At-Tabarí<sup>4</sup> says:—"When the Small-Pox and Measles appear, make a collyrium with caviare, which strengthens and preserves the pupil, and does away with any opacity."<sup>8</sup>

p. 218. (10.) Ahrún<sup>9</sup> says:—"Pestilential ulcers are hot abscesses, which appear in the groin and armpit, and prove

<sup>1</sup> See above, Chap. XIV. § 4, &c., and below, § 10.

<sup>2</sup> See below, §§ 36, 53.

<sup>3</sup> See above, Chap. X. § 1.

<sup>4</sup> See below, Note AA.

<sup>5</sup> See above, § 6, and below, § 13.

<sup>6</sup> See above, § 3, and below, § 16.

<sup>7</sup> There is a small blank space in the Arabic MS. (p. 90. l. 2.), which the Translator has ventured to fill up with the two words enclosed within brackets. The prescription now corresponds almost exactly with Formm. 20, 23.

<sup>8</sup> See above, § 3.

<sup>9</sup> See below, Note BB.

fatal in four or five days. Those which are black are malignant; the red are sometimes fatal; but when they are black or green the patient hardly ever recovers. And so also with the Measles and the Small-Pox, and other eruptive diseases, those that are black or green are the most malignant; the yellow are also dangerous, but not so much so as those just mentioned; while those that are red or white are the most curable.”<sup>1</sup>

(11.) He says also:—“The Small-Pox, boils,<sup>2</sup> and the like, all arise from blood that is corrupt and adust with yellow bile.”

(12.) He says also:—“When the patient is able to bear it, nothing is more beneficial than blood-letting in a case of pestilential ulcer. And let the part be afterwards anointed with Armenian bole, and let the patient take some of the same medicine in cold water, for it is beneficial.”

(13.) The symptoms of the Small-Pox and of the p. 219. Measles<sup>3</sup> are an acute fever at the very beginning, with head-ache,<sup>4</sup> and redness of the eyes. The eruption generally appears on the third day from the beginning of the fever, but sometimes on the first or second day. One of the most favorable symptoms is the appearance of the eruption on the third day, or at the time when the fever is mild; and *vice versâ*. When, however, they appear on the first day, it is from the violence of the fever or intense mental application.

(14.) The fever attending the Small-Pox is a continued fever, and for the most part attacks children. When you see the eruption appear, do not give the patient medicines to extinguish the fever, but rather let him drink a decoction of the seeds of sweet fennel and smallage, in order to bring it out from the interior.<sup>5</sup>

(15.) Before the eruption begins to appear you should bleed the patient; but not afterwards.<sup>6</sup>

(16.) Let the patient keep in his mouth a decoction of len-

<sup>1</sup> See above, §§ 1, 6, and below, § 17.

<sup>2</sup> See below, Note J.

<sup>3</sup> See above, § 8, and below, § 19.

<sup>4</sup> The Arabic word is صداع *Sudâ'*, whence comes the word *soda*, found in the medieval medical writers.

<sup>5</sup> See above, § 2, and Chap. vi. § 3.

<sup>6</sup> See above, *Divis.* § 2.



tiles and roses,<sup>1</sup> and make a collyrium<sup>2</sup> for his eyes of antimony and camphor, in order to prevent the pustules from coming out in his mouth, throat, and eyes.

(17.)<sup>3</sup> When the pustules of the Small-Pox are of a violet or greenish colour, the disease is of a fatal kind.<sup>4</sup> When p. 220. the pustules are ripened, let the patient sleep upon rice meal, and let fumigations be made with myrtle leaves or olive leaves; for these things tend to dry the pustules.<sup>5</sup> Modern physicians are accustomed to give to drink butter-milk from which the butter has been removed.<sup>6</sup> The favorable and unfavorable symptoms of the Small-Pox and Measles may be learned from the chapter on the symptoms of acute diseases.<sup>7</sup>

(18.) The author of the "Abbreviationes,"<sup>8</sup> or "Epitome," says:—"The Small-Pox and Measles belong to the species of hot diseases; they both occur for the most part when the southerly winds are violent,<sup>9</sup> especially if this is in the summer;<sup>10</sup> and in those persons who have for a long time omitted (?) blood-letting."

(19.) According to my own experience, the symptoms of the Measles and Small-Pox are,<sup>11</sup> a continued fever, starting in sleep, redness, itching in the nose, violent pain in the back, constant yawning and stretching, and an inflamed colour.

<sup>1</sup> See above, § 8, and below, § 30.

<sup>2</sup> The Arabic word is كحل *Cahala*, the verb from which the substantive

كحل *Cuhl* is derived. See below, Note O.

<sup>3</sup> The paragraphs in the Arabic MS. here do not agree with those in the Latin version. See above, p. 102, Note (4).

<sup>4</sup> See above, § 10, and below, § 53.

<sup>5</sup> See above, § 4, and below, §§ 21, 40.

<sup>6</sup> See Paulus Aegineta, i. 88, and Dr. Adams's Commentary, p. 155.

<sup>7</sup> The Arabic is literally *from the symptoms of acute diseases*, the Latin version has *in capitulo morborum acutorum*. It is not quite clear if Rhazes means to refer to any particular passage in his own works, but the favorable and unfavorable symptoms of these diseases are enumerated at length above, Chap. xiv. § 1, &c.

<sup>8</sup> The Arabic title is الاختصارات *Al-Ichtisârât*, which is several times quoted by Rhazes, but does not appear either in Haji Khalfâ's *Lex. Bibliograph.*, or in the Index to Nicoll and Pusey's *Catal. MSS. Arab. Biblioth. Bodl.*

<sup>9</sup> The Latin version is very different:—"Variolae et Blactiae sunt de morbis qui dicuntur *nuntii*, et ut pluries moventur ex corruptione aëris inducta a cadaveribus," &c.

<sup>10</sup> See above, Chap. II. § 4, and below, § 53.

<sup>11</sup> See above, § 13, and below, § 20.



p. 221. (20.) As-Sáher<sup>1</sup> says :—" Whenever with a continued fever there is a redness of the eyes and cheeks, itching of the nose, and heaviness of the head, then either the Small-Pox or the Measles will shortly appear.<sup>2</sup> When the Small-Pox begins to make its appearance, you should endeavour to bring the eruption quickly to the surface, so as to prevent palpitation of the heart or sudden death ; for which purpose you p. 222. may give him the following mixture :<sup>3</sup>—

[Form. 20.] Take of washed Lac, five drachms,

Peeled Lentiles, seven drachms,

Gum Tragacanth, three drachms ;

Boil them in half a pint of water until the decoction is reduced to half the quantity ; and give it the patient to drink.

And take care<sup>4</sup> not to open the patient's bowels after the first week ; but let his food be astringent, such as lentiles with pomegranate water and vinegar. And when all the pustules are come out,<sup>5</sup> light a fire, if it be in the winter, with the wood of the tamarisk, oak, and vine ; but in the summer the fire will not be necessary."

(21.) You should, however, fumigate his room with sanders, and spread the floor with the tops of myrtle and willow, and the leaves of the pomegranate tree.<sup>5</sup> And when the desiccation of the pustules begins, sprinkle the patient with rice meal and millet meal,<sup>6</sup> and a little saffron.

(22.) I think that what has just been mentioned is useful in removing the marks of the Small-Pox ; and it should be frequently applied to the face. If the nose is affected, apply to it wax dissolved in oil ; and if the mouth, use mucilages.<sup>7</sup>

<sup>1</sup> See below, Note CC.

<sup>2</sup> See above, § 19, and below, § 27.

<sup>3</sup> See above, Form. 19, and below, Form. 23.

<sup>4</sup> See above, § 2, and below, § 34.

<sup>5</sup> See above, §§ 4, 17, and below, §§ 32, 40.

<sup>6</sup> The Arabic MS. (p. 88. l. 13.) has جاشير *Jáwashír*, *opoponax* ; but this is no doubt a mistake for جاورس *Jáwars*, *millet*. See above, § 4, and below, § 32.

<sup>7</sup> See above, Chap. VII. § 5, and below, § 33.

p. 223. (23.) The following medicine is useful for bringing out the Small-Pox :<sup>1</sup>—

[Form. 21.] Take of Figs to the number of five,  
Raisins, seven drachms,  
Peeled Lentiles,  
Lac, of each three drachms,  
Gum Tragacanth,  
Sweet Fennel Seed, of each two drachms ;  
Boil them in a pint and a half of water.

This medicine hastens the eruption of the Small-Pox, and prevents palpitation of the heart, and heat in the chest, and neighbouring parts.

(24.) Figs have the property of bringing out the Small-Pox from the interior.

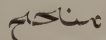
(25.) From the “Liber Liberationis,” (or “the Successful?”):<sup>2</sup>—“A medicine which renders the eruption of the Small-Pox easy, and should be given at the commencement of the disease, as soon as the pustules begin to appear :—


[Form. 22.] Take of large White Figs to the number of five,  
Peeled Lentiles, seven drachms ;  
Boil them in a pint and a half of water until only a quarter of a pint remains ;  
then mix in it one quarter of a drachm of Saffron, and let the patient drink it fasting, and at bed time.”

p. 224. (26.) Ibn Māsawaih<sup>3</sup> says :—“When you see the boils<sup>4</sup> tawny coloured, and spread all over the body, and the patient moans and is low-spirited, and his abdomen is inflated and resonant like a drum, it is a fatal sign.”

(27.) He also says :—“The symptoms of the Small-Pox are

<sup>1</sup> See above, Form. 8, and below, Form. 29.

<sup>2</sup> In the Arabic MS. (p. 88. l. 21.) the word is , which should perhaps be

 *Munjih*. There is a medical treatise with this title in the Bodleian Library (*Marsh*, 173.), but it is probably the work of an author posterior to Rhazes. It is attributed either to Abú Sa'íd Ibn Ibráhím Aṣ-Ṣiklî, or to Ibn Baiṭár. See Uri, *Catal. MSS. Orient. Biblioth. Bodl.*, p. 134, § 564 ; Nicoll and Pusey, *Catal. MSS. Arab.* p. 586.

<sup>3</sup> See below, Note DD.

<sup>4</sup> See below, Note J.

a continued fever, redness of the eyes and cheeks, and restlessness in sleep.”<sup>1</sup>

(28.) He also says:—“You should make a collyrium for the eyes with rose water, in which sumach has been infused, in order to prevent any pustules from breaking out in them.”<sup>2</sup>

(29.) In order to strengthen the eyes, you should make use of a collyrium of sumach and pomegranate flowers prepared with rose water.<sup>3</sup>

(30.)<sup>4</sup> After the pustules of the Small-Pox are come out, drop into the eyes some cuhl rubbed up in an infusion of dry coriander, and then strained, with a little common camphor; or else rubbed up in rose water.<sup>5</sup>

p. 225. (31.) You should endeavour to bring out the pustules as quickly as possible, in order to prevent palpitation of the heart, syncope, and sudden death.

[Form. 23.]<sup>6</sup> Take of Lac, five drachms,

Peeled Lentiles washed, seven drachms,

Gum Tragacanth, three drachms;

Boil them in half a pint of water, until only the half of that quantity remains; then give it the patient to drink.

(32.)<sup>7</sup> Let the patient's food be Indian peas and lentiles peeled, boiled in pomegranate water.<sup>8</sup> In the winter let a fire be lighted of the wood of the tamarisk, oak, and vine;<sup>9</sup> and when the pustules begin to dry up, paint the parts with a feather dipped in the meal of rice and millet, and a little saffron, dissolved in rose water.<sup>10</sup>

<sup>1</sup> See above, § 20, and below, § 52.

<sup>2</sup> See above, *Divis.* § 5, and below, § 35.

<sup>3</sup> The order of the paragraphs here in the Arabic MS. does not quite agree with that in the Latin version. See above, p. 102, Note (4).

<sup>4</sup> In the Arabic MS. this passage is given as a quotation, with the word **قال** *Kāla*, “he says,” prefixed, as usual; but, owing to the confusion in the order of the paragraphs noticed above, there is no name immediately preceding, to which it can be assigned. In the Latin translation it is attributed to Rhazes himself.

<sup>5</sup> See above, § 16, and below, § 35.

<sup>6</sup> See above, Form. 20, and below, Form. 33.

<sup>7</sup> Here again the order of the paragraphs in the Arabic MS. differs from that in the Latin version.

<sup>8</sup> See below, § 35.

<sup>9</sup> See above, § 20, and below, §§ 40, 80.

<sup>10</sup> See above, § 21, and below, § 80.

(33.) If any pustules come out in the nostrils or in the mouth, drop into the nose oil of violets, white wax, and gum tragacanth, and into the mouth<sup>1</sup> mucilage of fleawort seed. With respect to diet, put into the patient's drink troches of broad-leaved dock, and let his food be parched barley meal with pomegranate water; and do not give him young birds to eat until the fever is entirely gone, the pustules dried up, and the scabs fallen off.<sup>2</sup>

(34.)<sup>3</sup> At the beginning of the disease let the patient be fed on pot-herbs; and for the first week let his bowels be kept open with "Aqua Fructuum;"<sup>4</sup> and let him have for drink barley water as long as the acrimony continues. After the end of the first week take care not to give him anything that is laxative; for towards the end of this disease a diarrhoea sometimes comes on, accompanied with ulceration of the intestines; and let his food be peeled lentiles boiled in pomegranate water.<sup>5</sup> And do not put oil on the patient either in the beginning of the disease or towards the end, for in the beginning it hinders the eruption of the pustules, and towards the end it renders the ulcers corrupt.<sup>6</sup>

(35.) Serapion<sup>7</sup> says:—"As soon as the symptoms of the Small-Pox appear, the patient must lose blood, either by the lancet, or, if his strength be much reduced, by

<sup>1</sup> The Arabic MS. (p. 91. l. 17.) has *nose*, but the Latin version has *mouth*, and so also above, § 22, and below, § 81.

<sup>2</sup> See above, *Divis.* § 10, and below, § 35.

<sup>3</sup> Here again the Arabic MS. differs from the Latin version in the order of the paragraphs.

<sup>4</sup> See below, § 80. The preparation of the "Aqua Fructuum," as given by Mesue, was as follows:—

"R Pruna quadraginta,  
Myxa,  
Zizypha, ana triginta,  
Tamarindorum uncias duas,  
Cassiae Fistulae uncias tres,  
Mannae unciam unam;

Fiat ut diximus." (*i. e.* Coque in libris tribus aquae ad libram unam.)

See Mesue, *De Compos. Medicam.* p. 155, ed. 1589.

<sup>5</sup> See above, § 20.

<sup>6</sup> See below, § 42.

<sup>7</sup> See below, Note EE.

p. 228. means of cupping-glasses.<sup>1</sup> When the eruption begins to come out care must be taken of the eyes,<sup>2</sup> and before any pustules appear in them drop into them rose-water in which sumach has been boiled, or the juice of the pulp of pomegranates; and if any pustules should come out in them then drop into them cuhl rubbed up in fresh coriander water, or in a decoction of dry coriander in rain water.<sup>3</sup> Let the patient have to drink a decoction of lac and lentiles and figs in order to hasten the eruption; and when the pustules begin to come out give him barley water with a decoction of peeled lentiles. Let him not eat young birds until the fever is quite gone, and the pustules dried up; but let his food be Indian peas, lentiles, and pot-herbs.<sup>4</sup>

(36.) Simple medicines which remove the marks of the Small-Pox:<sup>5</sup>—Radish seed, bean meal, soft earth, asses' fat, chips of the wood of the willow tree, old bones, dried reed roots pulverized, prickly salt-wort<sup>6</sup> preserved with dried melon p. 229. seeds, litharge, saffron, bastard sponge, white of egg, barley water, oil of lilies, sal prunella (?), gum ammoniacum, frankincense, soap, white sugar candy, wheat starch, sweet and bitter almonds, sweet costus, sarcocol; besides the frequent use of the bath, and the drinking sweet pomegranate water.

(37.) From Ibn Māsawaih:<sup>7</sup>—"An admirable medicine for removing the marks of the Small-Pox:—

[Form. 24.] Take of old white Dung, (?)

Burnt Bones, of each ten drachms,  
 Reed Roots dried, twenty drachms,  
 Fresh common Cress,  
 Wheat Starch, of each ten drachms,  
 Lupines, five drachms,  
 Melon Seed,  
 Washed Rice,

<sup>1</sup> See above, *Almans*. § 2, and below, § 49.

<sup>2</sup> Here again about a line in the Arabic MS. seems to have been transposed by the carelessness of the transcriber.

<sup>3</sup> See above, §§ 28-30, and below, § 41.

<sup>4</sup> See above, §§ 32, 33, and below, §§ 80, 89.

<sup>5</sup> See above, Chap. xi. § 8, and below, § 53.

<sup>6</sup> The Latin translation has *sief*, apparently confounding شياف *Shiif*, with اشنان *Ushnān*.

<sup>7</sup> See below, Note DD.



Common Chick Peas, of each ten drachms,  
Ben Seeds,  
Costus,

Long Birthwort, of each five drachms;

Rub them in Barley water or Melon water, and anoint the body with it, and let the patient be washed next day with a decoction of Violets and Barley."

(38.) Another medicine for removing the marks of the Small-Pox :—

[Form. 25.] Take of old Bones,

Persian Reed roots,  
Fresh common Cress,  
p. 230. Wheat Starch,  
Lupines,  
Melon Seed,  
Common Chick Peas,  
Washed Rice,  
Ben Seeds,  
Costus;

Rub them in Melon water, and anoint the patient with it.

(39.) A plain and simple liniment :—

[Form. 26.] Take of peeled Melon Seed,

Sweet Almonds peeled,  
Rice Meal,  
Common Chick Peas,  
Old Bones,  
Preserved (?) Litharge;

Rub them in Melon water or Barley water, and anoint the patient.

(40.) I once saw a person with the Small-Pox, who was washed with salt and water, and afterwards swelled, and suffered great pain, because the pustules were not ripened. It is better that they should be dried up when necessary with a considerable quantity of common camphor dissolved in rose water; and let the patient sleep<sup>1</sup> upon millet meal, willow leaves, and roses both dried and fresh; in summer, when there is much heat, light a fire with sanders, and in winter with tamarisk, myrtle leaves, and willow leaves.

(41.) Before the Small-Pox comes out<sup>2</sup> it is better to drop into the eye rose water with common camphor or sumach, or

<sup>1</sup> See above, §§ 17, 20, and below, § 80.

<sup>2</sup> See above, § 35, and below, § 61.

p. 231. the pulp of pomegranates, or something of the same nature. And if any pustules should come out in the eye, let some cuhl be rubbed up in rose water with coriander, common camphor, and Nabathæan caviare without vinegar.<sup>1</sup> By this means you may prevent the pustules from coming out in the eye.

(42.) Oil must be applied when the pustules are dried and become eschars, and it is then very useful in causing them to fall off quickly; but before this time it should not be used.<sup>2</sup>

(43.) The pustules are a species of crisis, and for this reason the eruption is not to be checked, for that would be like checking the crisis, and might make the disease fasten upon some of the more important organs; and therefore, when you see symptoms of the pustules, you may be sure that Nature is inclined to throw out the humour to the surface of the body, and should aid her in this attempt by giving the patient suitable things to drink; and do not let the room in which he is placed be very cold, for this would hinder the eruption from coming out by obstructing the pores of the skin.<sup>3</sup> It is necessary to examine the reason why this crisis occurs especially in children.<sup>4</sup> And when the pustules appear p. 232. on a critical day,<sup>5</sup> and are quick in ripening, it is a favorable sign; but when they appear on a bad day, and are slow in ripening, it is unfavorable.<sup>6</sup> The worst kind is that in which the pustules break out on the second or the sixth day, and in which the fever is not alleviated by the eruption.<sup>7</sup>

(44.) Women employ lily<sup>8</sup> leaves for drying the pustules, and I have seen them succeed extremely well. But salt and water is still more efficacious, when it does not occasion the

<sup>1</sup> See above, Chap. vii. § 3.

<sup>2</sup> A few words follow in the Arabic MS. (p. 93. l. 13.) which are not to be found in the Latin translation, and which appear to be corrupt. See above, § 34, and below, § 61.

<sup>3</sup> See above, Chap. vi. § 1, and below, § 58.

<sup>4</sup> See above, Chap. i. § 6.

<sup>5</sup> See below, Note V.

<sup>6</sup> The Translator suspects some error in the Arabic MS. (p. 93. l. 22.) and in the Latin version, and has therefore ventured to alter the passage so as to make it agree with *Almans.* § 9.

<sup>7</sup> See above, Chap. xiv. § 7.

<sup>8</sup> The Arabic MS. (p. 93. l. 24.) has سوس *Sūs*, but this is no doubt a mistake for سوسن *Sūsān*. See above, p. 57, Note (2).

patient much smarting pain; and this will not be the case when it is applied to those parts of the body which are not excoriated.<sup>1</sup> Oil takes away the eschars; and the red plaister<sup>2</sup> is very useful in removing the scars that are called the *pock-holes*.<sup>3</sup> I have seen many people give a patient dates to eat when the Small-Pox begins to appear; but this is a very dangerous mistake.<sup>4</sup>

(45.) I have found by experience, that, when the pustules have begun to come out,<sup>5</sup> nothing is more injurious than lettuce, blood-letting, and drinking snow-water; for the patient should not drink what is cold, nor be exposed to cold air. I have seen a person treated in this manner, and  
p. 233. there came on a palpitation of the heart with excessive swooning.

(46.) A female patient had the Small-Pox, with pustules that were small, hard, and warty, but not black; she had also a difficulty of breathing, and violent inflammation of the bowels; and she died. Patients often die of syncope, with shortness of breath, and coldness of the extremities.

(47.) Sometimes the Small-Pox sinks inwards, and is so like the Measles that it is afterwards said that the Measles are turned into the Small-Pox. The difference between the two I have found to be, that the Measles are red, and appear only on the surface of the skin, without rising above it, while the Small-Pox consists of round eminences.<sup>6</sup> When these eminences appear, fix your attention on them, and if you are in doubt as to the disease, do not express any opinion about it for a day or two; but when there are no eminences, you must not give as your opinion that the disease is the Small-Pox.

<sup>1</sup> See above, § 4, and below, § 81.

<sup>2</sup> Perhaps the powder mentioned above, p. 57, may be alluded to. Avicenna has a preparation called "Unguentum Rubrum," v. 1. 11. vol. ii. p. 314, ed. Lat. See Sontheimer, *Zusammengesetzte Heilmittel der Araber*, p. 195.

<sup>3</sup> In Arabic اثر البجدري *Atharu-l-Jadari*, the "marks of the Small-Pox." The Latin version has "Mater Variolarum."

<sup>4</sup> See above, Chap. v. § 3.

<sup>5</sup> The Translator is not certain of the sense of this paragraph, which differs considerably from the Latin version. He is inclined to think that it may be illustrated by Chap. v. § 14: vi. §§ 1, 3; *Almans*. § 3; *Divis*. § 2.

<sup>6</sup> See below, § 71.

p. 234. (48.) A liniment which has been found by experience to remove the marks of the Small-Pox :—<sup>1</sup>

[Form. 27.] Take of the Meal of common Chick Peas, ten drachms,  
Lupine Meal, three drachms,  
Sweet Costus,  
White Litharge,  
Pepper-corns, of each one drachm ;

Pound all of them together with barley-water.

(49.) Ishak Ibn Honain<sup>2</sup> says :—“ As soon as many pustules have come out, you should commence the treatment by taking away blood either by the lancet or by cupping-glasses,<sup>3</sup> until swooning comes on ; and let the patient take barley-water. If his bowels are relaxed give him barley-gruel, especially in the Measles, which disease is often accompanied by a diarrhoea ; and let him avoid all sweet and thick food.”

(50.) From Mosih (?) :<sup>4</sup>—“ A medicine that removes the marks of the Small-Pox :—

p. 235. [Form. 28.] Take of Wheat Starch,  
Peeled Almonds, of each two parts,  
Sweet Costus, half a part,  
Reed Roots, four parts,  
Melon Seeds not (?) peeled,  
Peeled Beans,  
Barley,  
Saffron, of each three parts,  
Gum Tragacanth, half a part ;





Strain through (?) a piece of silk, and anoint the scars with a feather ; leave it during the night, and wash them the next day in a decoction of chamomile, melilot, and violets ; if GOD permit.”

(51.) “ A medicine which brings out the Small-Pox to the surface of the body :<sup>5</sup>—

<sup>1</sup> See above, Chap. xi. § 9, &c.

<sup>2</sup> See below, Note FF.

<sup>3</sup> See above, § 35, and below, § 89.

<sup>4</sup> This name is somewhat doubtful ; the Arabic MS. (p. 95. l. 3.) has  or  ; the Latin Translation “ Museya.” Channing says in his note, “ Incertum est quis sit ; forte Pater [Filius?] Mesues,  sc.” The name occurs several times in Ibn Baiṭār, where in a very legible Arabic MS. it is written quite plainly .

<sup>5</sup> See above, Form. 21, and below, Form. 31.



[*Form. 29.*] Take of White Figs, to the number of five,  
 Stoned Raisins, ten mithkals,<sup>1</sup>  
 Lac, washed and cleansed from its stalks, five drachms,  
 Gum Tragacanth, cleansed, two mithkals,  
 Saffron, five mithkals;

Boil them in three pints of water until only one pint remains; let the patient drink one third of a pint every day for three days; if GOD permit."

(52.) I have found the peculiar symptoms of the  
 p. 236. Small-Pox<sup>2</sup> to be, a continued fever, pain in the throat,  
 and, in the beginning of the fever, pain in the back; the  
 patient lies on his back, moves his feet up and down, is rest-  
 less, and disturbed. You must be cautious as to blood-letting,  
 and the circumstances under which you employ it.<sup>3</sup>

(53.) Georgius<sup>4</sup> says:—"The Measles arise from blood with  
 which is mixed a great quantity of yellow bile,<sup>5</sup> and the Small-  
 Pox from gross blood mixed with much humidity; and there-  
 fore the latter disease is moist, and the former dry. They occur  
 for the most part in the autumn, when there is no north wind,  
 nor any rain,<sup>6</sup> but the air is turbid, dusty, and obscure, with  
 continued south winds. The symptoms are these: a continued  
 fever,<sup>7</sup> head-ache, pain in the back, heaviness of the head, red-  
 ness of the eyes, pain in the throat and chest, dryness of the  
 p. 237. mouth, thick spittle, itching of the nose and sneezing,  
 fulness of the face, difficulty of breathing, nausea, want  
 of appetite, stretching and uneasiness, and starting in the sleep.  
 The best and most salutary crisis that can take place in these  
 diseases is bleeding at the nose<sup>8</sup>. When the Measles and  
 Small-Pox are of a violet or black colour,<sup>9</sup> and they sometimes

<sup>1</sup> The *مشقال* *mithkāl* is an Arabic weight equal to about a drachm and a half: but see below, Note N.

<sup>2</sup> See above, § 27, and below, § 53.

<sup>3</sup> The Translator is rather in doubt as to the meaning of this last clause. The Latin translation is, "Et debes esse satis sollicitus, et bene praemeditari in flebotomia et ejus circumstantiis."

<sup>4</sup> See below, Note GG.

<sup>5</sup> See above, Chap. III. § 2; and compare § 11, and Chap. XIII. § 3.

<sup>6</sup> The Latin Translation has, "et *est* pluviosus," but the sense of the Arabic is just the contrary. See above, Chap. II. § 5; and *Cont.* § 18.

<sup>7</sup> See above, § 52, and below, § 71.

<sup>8</sup> See below, § 57.

<sup>9</sup> See above, § 17, and below, § 81.



appear and then sink in again, and there comes on great anxiety, and hoarseness of the voice, and delirium, the patient will hardly recover from them. As to those pustules which are dry and contain no fluid, but are warty, and with the skin cracked, and accompanied by great anxiety, difficulty of breathing, delirium, and loss of voice, they are fatal. Sometimes small pustules are found inside large ones, and they are then called 'doubled pustules.'<sup>1</sup> The marks of the Small-Pox are removed by powdered reed roots, chips of the wood of the willow tree, and white litharge."<sup>2</sup>

(54.) Galen<sup>3</sup> describes a plaister in the first book of p. 238. his treatise *κατὰ γένος*,<sup>4</sup> which is useful in many diseases, and then adds, "and also in the *Small-Pox*;" from which passage you may know that he was certainly acquainted with this disease. He also mentions it again in the second book,<sup>5</sup> and says, "a plaister which is useful in different diseases, and in the *Small-Pox*;" and this plaister he quotes from Andromachus,<sup>6</sup> who lived before Galen. And again in the fourth book of "Timaeus"<sup>7</sup> Galen says that "the ancients applied the name *φλεγμονή* to every thing in which there was inflammation, as the erysipelas, *Small-Pox*, and fever, and that these diseases were in their opinion generated from bile." He mentions it also in his treatise "On Pulses,"<sup>8</sup> and in the beginning of the ninth book of his treatise "On the Use of the Members"<sup>9</sup> he says that "the superfluous parts [of the food] which are not converted into blood, putrefy in process of time, and become acid, until there are generated from it the erysipelas<sup>10</sup> and the *Small-Pox*."

<sup>1</sup> See above, Chap. xiv. § 5.

<sup>2</sup> See above, §§ 6, 36, and below, § 81.

<sup>3</sup> See above, Chap. i. § 1, and below, §§ 63, 64.

<sup>4</sup> See below, Note D.

<sup>5</sup> See below, Note HH.

<sup>6</sup> See below, Note II.

<sup>7</sup> See below, Note H.

<sup>8</sup> See below, Note E.

<sup>9</sup> See below, Note G.

<sup>10</sup> The Arabic MS. has here (p. 97. l. 2.) *هَشَبَا* *hashbah*, "the Measles," but the true reading is undoubtedly *هُمْرَا* *humrah*, which is the word found above, Chap. i. § 1, (p. 12, l. 8, ed. Chann.) and below, § 63. (p. 98, l. 20. MS. Arab.) The Latin Translation, also, has "*erisipilla*." See below, Note F.

(55.) I have found upon examination that the amount of danger in the Small-Pox may be estimated by the difficulty of breathing and hoarseness of voice,<sup>1</sup> and that many persons die of suffocation; and therefore I think you should begin at once with taking care of the throat, at the commencement of the attack with styptic remedies, towards the end with lenitives and laxatives.

(56.) In the hospital I have found<sup>2</sup> that in the Small-Pox and Measles you should use blood-letting before the fourth day and after it, and especially before all the symptoms appear; after which time you will not be forced to use this remedy, but may lay it aside until the patient's strength be restored, unless the morbid matter be very great, in which case blood-letting may be used, but sparingly.<sup>3</sup>

(57.) Those who die in this disease die on account of the excess of the morbid matter, and because Nature is not able to throw it all out on the skin. It is useful to take blood from the veins of the nose at the commencement of the disease; for I have seen several persons recover in consequence of bleeding at the nose.<sup>4</sup> The Small-Pox for the most part attacks children, who cannot bear blood-letting. When you see the autumn is hot and dry, and the winter the same, you may expect the Small-Pox to prevail until there is plenty of rain.<sup>5</sup>

(58.) A patient that has the Small-Pox should be well wrapped up when the pustules are coming out, and carefully avoid the cold and the breathing cold air; by which means he will recover.<sup>6</sup> And if it be summer time, he should not be put in an airy room,<sup>7</sup> but in a place where he may be made to

<sup>1</sup> See above, §§ 3, 4, and below, § 66.

<sup>2</sup> There is some obscurity (and possibly some error) in this passage as found in the Arabic MS. (p. 97. l. 7.), in which also *two* lines appear to be unfinished. The Latin Translation nearly agrees with the sense given in the text.

<sup>3</sup> See below, § 58.

<sup>4</sup> See above, § 53, and below, § 82.

<sup>5</sup> See above, § 53.

<sup>6</sup> See above, *Almans.* § 3.

<sup>7</sup> The Arabic word is written in one place (p. 97, l. 19) حيش, and in the other (l. 21) حنس, but it is tolerably certain that both are wrong, and that the word ought to be written خيش *chaish*. The Latin Translator omits the word

sweat,<sup>1</sup> unless a fainting fit should come on; in which case sweating should be avoided, and the patient placed in an airy room, and smell sanders, rose-water, and camphor. He should not use cooling drinks or regimen until the pustules have fully come out; after which time he should not lose blood, unless the morbid matter be very great,<sup>2</sup> for this would repel it into the interior, and hinder the crisis that Nature is trying to bring about.

(59.) Mâserjawaih<sup>3</sup> says:—"He who hinders the pustules from coming out in the eye, or, if any *should* appear, disperses them and prevents their doing any injury, is a skilful physician."<sup>4</sup>

p. 241. (60.) Ibn Mâsawaih<sup>5</sup> says:—"The inspissated juices of warted-leaved rhubarb, juice of unripe grapes, and acid juice of citrons<sup>6</sup> are useful against the Small-Pox, Measles, and pestilential ulcers, because they subdue the acrimony of the yellow bile, and act as extinguent to the blood."

(61.) When the pustules begin to appear, and have reached the eye, you should drop into it cuhl, when there is any fear of a copious flood of tears;<sup>7</sup> in this case you should drop into the eye a collyrium<sup>8</sup> composed<sup>9</sup> of cuhl, haematite, and acacia. Oil should not be applied until the ulcers are dried, in order

altogether in the former passage, and in the latter renders it "camera aperta ventis opposita." This sense of the word is not noticed by Richardson or Freytag in their Lexicons, but Castell (*Lex. Heptagl.* p. 1220) explains it to mean "domus venti, frigida, ventosa," "locus frigidus, humidusque," and refers to a passage in Avicenna (*Can.* iv. 1, 2, § 7. vol. ii. p. 13. l. 27. ed. Arab., vol. ii. p. 27, ed. Lat.), where the word is used in the same sense.

<sup>1</sup> See above, Chap. vi. § 1.

<sup>2</sup> See above, § 56.

<sup>3</sup> See below, Note Z.

<sup>4</sup> As the Arabic MS. does not seem to be quite sound in this passage, the Latin Translation has been followed.

<sup>5</sup> See below, Note DD.

<sup>6</sup> See above, Chap. v. § 2.

<sup>7</sup> The Arabic MS. (p. 98. l. 6.) has **بق**, which may be a mistake for **بثق** *bithk*, from **بثق** *bathaka*, which is explained to mean "lacrymas celeriter effudit oculus."

The Latin version has "quando dubitatur in illo tempore de *melancholia*," which gives no sense, and of which reading the Translator is unable to explain the origin.

<sup>8</sup> Literally, "a collyrium for a copious flood of tears." Here again the Arabic MS. has **بثق**, which is probably the same word as that just noticed.

<sup>9</sup> See above, § 41, and below, §§ 67, 80.

to promote the falling off of the eschars;<sup>1</sup> for before that time it is dangerous to use it, as it hinders their dying off, and thereby occasions palpitation of the heart and fainting :—some physicians, however, make use of it.

(62.) I have sometimes seen the Measles appear in a person after the seventh day<sup>2</sup> from the beginning of the fever, and without any of the symptoms of the Small-Pox and Measles, except a constant vehement distress and nausea. And when you see the patient affected with a continued fever, and anxiety, and a constant vehement inquietude, you may be sure that these are more especially the symptoms of the Measles;<sup>3</sup> and in p. 242. this case the surface of the body is not to be cooled.

(63.) In the fourteenth book of his treatise “On Pulses”<sup>4</sup> Galen says that “the blood is putrefied in hot tumours, *Small-Pox*, and gangrene, in an extraordinary degree, and that the inflammation runs so high that the skin is burned, and there break out in it the Small-Pox, gangrene, and the like.”<sup>5</sup> And in the ninth book of his treatise “On the Use of the Members”<sup>6</sup> he says that “the superfluous parts of the food that remain, which are not converted into blood, and remain in the members, putrefy and become acid in time, until there are generated the erysipelas, *Small-Pox*, and spreading inflammation.”

(64.) Galen mentions the Small-Pox, but [not]<sup>7</sup> any peculiar mode of treatment; he considers the disease to be a species of crisis.

(65.) If a person has a pain in the back, without any other symptom of the disease, and the bowels are relaxed and the urine white, he is going to have the Small-Pox. And in short, there is no more characteristic symptom of the Small-Pox than pain in the back with fever; so that when you see this happen in the autumn you may be sure that the Small-Pox is about to

<sup>1</sup> See above, § 42, and below, § 80.

<sup>2</sup> The Latin Translation has “post *nonum* diem.”

<sup>3</sup> See above, Chap. III. §§ 1, 2.

<sup>4</sup> See below, Note E.

<sup>5</sup> This and the following sentence are quoted above, Chap. I. § 1, which passage has served slightly to correct the text in this place.

<sup>6</sup> See below, Note G. Here, and also above, § 54, the Latin Translation has, “in *nono libro interiorum*.”

<sup>7</sup> The Translator has ventured to insert the negative here, in accordance with what is said above, Chap. I, § 2.



appear rather than the Measles, for the Measles are not attended with pain in the back. The reason of this depends, I think, on the violent distension of the vena cava, which extends  
 p. 243. along the vertebrae of the spine; for in the Measles this vein is not distended because the disease arises rather from the bad quality of the blood than from excess in quantity, while on the other hand in the Small-Pox the quality of the blood is not very much deteriorated, compared with the Measles.<sup>1</sup>

(66.) In the Small-Pox there is much superfluous humour, and therefore you must beware, and endeavour to bring out the eruption to the surface; and if the patient be not hot, let him be treated with such medicines as are warming, and omit such as are extinguent. But if the tongue is black, and the heat increases, then do not treat him in this way. Care must be taken of the throat,<sup>2</sup> which is often affected with quinsy and suffocation; and the patient should make use of a styptic gargle, and afterwards, if the pain be violent, warm water and sugar-water.<sup>3</sup> When the pustules are slow in ripening, the body may be fomented with the steam of a decoction of chamomile.<sup>4</sup>

(67.) Those pustules which appear in a circular form<sup>5</sup> with their summit concealed (?) are of a bad and mortal kind.<sup>6</sup> When pustules come out on the eyelids wash them with a collyrium composed of red horn poppy, rusot, aloes, and saffron;<sup>7</sup> and drop into the eyes rose-water with sumach.<sup>8</sup>

(68.) There was a patient who had a severe attack of a  
 p. 244. bad kind of Small-Pox; so we had him blooded before he felt much suffocation in his throat, and there was no extinguishing medicine which we did not give him.<sup>9</sup> Accordingly, his throat began to be less constricted, and he was

<sup>1</sup> See above, Chap. III. § 3.

<sup>2</sup> See above, § 55.

<sup>3</sup> There is probably some error in the MS. in this place (p. 99. l. 12.), as above, Chap. VII. § 5, the patient is directed to make use of *cold* water for his throat.

<sup>4</sup> See above, Chap. VIII. § 2.

<sup>5</sup> See above, Chap. XIV. § 3.

<sup>6</sup> Some words follow in the Arabic MS. (p. 99. l. 14) which are not noticed in the Latin Translation, and appear to be corrupt.

<sup>7</sup> See above, Chap. VII. § 2.

<sup>8</sup> See above, § 41, and below, § 74.

<sup>9</sup> See above, Chap. VII. § 5.



getting better from the Small-Pox, so that we had good hopes of his recovery; when suddenly there came on a great perturbation of the humours, and the patient was seized with a very acute pain in his leg,<sup>1</sup> and the pustules turned black, and he died of the violence of the pain that same day. I had intended to scarify his leg in that part, but his strength began to sink within an hour, so that I had no hope of saving him, and at last he fell into such a state that blood oozed from the pores of his skin. I have seen several patients in whom a large sort of pustules came out, and who had towards the end of the disease a pain in the leg.

(69.) Lac should be given to drink in the Small-Pox, in order to strengthen the liver.

(70.) At-Tarmadī<sup>2</sup> says:—"When the pustules break<sup>3</sup> let them be anointed with oil and salt; and let the patient p. 245. stand in the sun for the space of an hour, and afterwards be washed in a decoction of figs and myrtles, and fumigated with tamarisk; then after three days let him be rubbed with a liniment, made of white bole and a little salt,<sup>4</sup> which is to remain on him for half a day, and then to be washed off as before. When the pustules are dried up give the patient camel's milk to drink, and when his body is ulcerated sprinkle under him a white aromatic powder."<sup>5</sup>

(71.) Bachtishwa<sup>6</sup> says:—"The symptoms of the Small-Pox<sup>7</sup> are fever with redness of the face and body, and especially an intense redness of the gums; at the commencement of the disease if the pustules are raised like berries, it is the Small-Pox, but if the red places are nearly level with the surface of the body,<sup>8</sup> it is the Measles. The treatment of both

<sup>1</sup> See above, Chap. xiv. § 11.

<sup>2</sup> See below, Note JJ.

<sup>3</sup> See below, § 72, where almost the same quotation appears with a few verbal differences: each passage has helped the Translator in some degree to correct the text of the other.

<sup>4</sup> See above, Chap. ix. § 2, and below, § 72.

<sup>5</sup> See below, § 72.

<sup>6</sup> See below, Note KK.

<sup>7</sup> See above, §§ 47, 53, and below, § 80.

<sup>8</sup> Literally, like *حصف* *hasaf*, a word which is explained by Castell (*Lex. Heptagl.* p. 1364) to mean *scabies sicca, impetigo, sudoris papulae*, &c.

diseases is the same: at the beginning, give the patient every day ten drachms of vinegar<sup>1</sup> with four grains<sup>2</sup> of musk, p. 246. if the eruption be plentiful, and if it be less copious then give it in proportion. After three days give him the following medicine:—

[Form. 30.] Take of cleansed Roses, four drachms,  
Peeled Lentiles, four drachms,  
Lac, two drachms;

Boil them in two pints<sup>3</sup> of water until half a pint remains; strain it, sweeten it with sugar, and give it the patient to drink on an empty stomach during three or more days.”

(72.) He then proceeds in almost the same words as At-Tarmadî:<sup>4</sup>—“When the pustules break, take two drachms of [oil of?]<sup>5</sup> sesamum, add to it a little burnt [Andarene] salt,<sup>6</sup> and with this anoint the patient’s body; let him stand in the sun for the space of an hour, and afterwards be washed in a decoction of the leaves of myrtles, roses, and pomegranate flowers, with a little salt; then let him be fumigated with the leaves of myrtles and tamarisk, and after two or three days let him be

<sup>1</sup> The Arabic MS. (p. 100. l. 9.) has بل *Bal*, which signifies a species of cucumber. (See Avicenna, ii. 93. vol. i. p. 282, ed. Lat.; vol. i. p. 144, ed. Arab.)

The Latin Translator has “*aceti*,” and seems, therefore, to have read خل *Chal* in his copy, which the present Translator has adopted.

<sup>2</sup> The Arabic word is قيراط *Kirât*, (connected with our word *carat*,) which was probably equal to about four grains of our standard. See Casiri, *Biblioth. Arabico-Hisp. Ecur.* vol. i. p. 281, quoted by Channing, pp. 102-4.

<sup>3</sup> The word here is سكرجة *Sucurjah*, of which measure the exact amount appears to be somewhat uncertain. See Castelli *Lex. Pers.* p. 348, and *Lex. Heptagl.* p. 2529.

<sup>4</sup> See above, § 70.

<sup>5</sup> The Translator has taken the liberty of adding these words from the passage above, Chap. ix. § 2.

<sup>6</sup> The Arabic words are (p. 100. l. 14.) ملح عجيين *milh 'ajin*, literally “sal farinae cum aqua subactae,” (See Castelli *Lex. Heptagl.* p. 2660,) a phrase which the Translator has been unable to find in Avicenna or Ibn Baitâr, or elsewhere. The Latin Translation has merely “*salis combusti*.” In the very similar passage above, Chap. ix. § 2. p. 57, the expression is ملح اندراني *milh Andarâni*, “Andarene salt,” which the Translator has ventured to introduce into the text in this place.

rubbed with a liniment made of white bole and a little salt, which is to remain on him for half a day, and then to be p. 247. washed off as before. When the scabs fall off take some rice, wash it and dry it, then pound it, put with it a little saffron, [and mix it with water ;]<sup>1</sup> anoint the patient with it, and leave it on him for half a day. If his body be ulcerated, sprinkle under him a white aromatic powder ; and when the pustules begin to dry up, give him camel's milk to drink. If his bowels are relaxed, give him barley-gruel and rice with gum Arabic.<sup>2</sup> If the patient swells and has abscesses form, and his voice becomes hoarse, and the dryness (?) be great, and this happens on the seventh day, the end will be fatal ; and if the pustules be black or of a very deep red colour, it is an equally bad sign.<sup>3</sup>

(73.) For the mode of treating the scars and marks of the Small-Pox the reader may consult the chapter on that subject.<sup>4</sup>

(74.) The stale urine of a man is useful in the Measles. If you macerate sumach in rose-water, and use it as a collyrium in the Small-Pox, it will strengthen the pupil of the eye, and prevent any pustules coming out in it.<sup>5</sup>

(75.) A medicine which quickly brings out to the surface of the body the Small-Pox, Measles, and all kinds of p. 248. pustules :—

[Form. 31.]<sup>6</sup> Take some dried Figs,  
Stoned Raisins,  
Lac cleared from its stalks,  
Gum Tragacanth,  
Saffron,  
And peeled Lentiles ;

Boil them in water, and let the patient drink the decoction.<sup>7</sup>

<sup>1</sup> These words are added from the Latin Translation, as they are not in the Arabic MS. (p. 100. l. 20.)

<sup>2</sup> See above, p. 69, Note (1).

<sup>3</sup> What follows in the Arabic MS. (p. 101. l. 1.) differs from the Latin version, and both appear to be corrupt. The Latin is as follows :—"Et similiter blactiae, et omnes aliae res existentes in exterioribus ; et in cura blactiarum respicias capitulum *De Cicatricibus*." The Translator has therefore been obliged to omit some words, and to make the best sense in his power of the remainder.

<sup>4</sup> The chapter referred to is probably lib. xxv. cap. 11.

<sup>5</sup> See above, § 67, and below, § 80. See also below, Note LL.

<sup>6</sup> See above, Form. 29.

<sup>7</sup> The Latin version gives this formula in a more complete state as follows :—

(76.) From the "Liber Memorialis" (or "Register?") of 'Abdús:<sup>1</sup>—"Medicines, whose author is unknown, which are wonderfully efficacious in removing the marks of the Small-Pox:—

[Form. 32.] Take some Lupines,  
Common Chick Peas, black,  
Burnt Shells,  
And burnt Cow-dung;  
Mix them up in water, and smear it on the face.

(77.) "Or take equal parts of barley and sheep's dung, soak the barley in water till the husks come off, then bruise them, and mix them up with red vinegar, and smear it on the marks of the Small-Pox.

(78.) "Or take the water which is in the hoof of a roasted ram,<sup>2</sup> wash the parts with it, and it will remove the marks.

(79.) "Or, take asses' grease, mix it with oil of roses, p. 249. and smear it on the parts."

(80.) Ibn Māsawaih<sup>3</sup> says:—"When there is with a continued fever<sup>4</sup> a redness of the eyes and face, much heaviness of the body and head, itching of the nostrils, sneezing, and a pricking pain all over the body, these are signs of the eruption of the Small-Pox. Your first care should be directed to the eye, for which you should use a collyrium made of sumach and rose-water, in order to prevent any pustules from coming out in it.<sup>5</sup> After the appearance of any pustules drop into the eye cuhl rubbed up in a decoction of dry coriander in warm water, with the addition of a little camphor after it is strained. And in order to bring out the eruption of the pustules quickly,

"R. Ficus siccas numero septem,  
Passularum enucleatarum drachmas sex,  
Laccae mundatae a lignis suis sesquiunciam,  
Dragaganti uncias tres,  
Crocī scrupulos duos,  
Lentium excoiatarum uncias quinque;

Coquantur in duobus rotulis aquae usque ad medietatem, et detur de ea in potu."

<sup>1</sup> See below, Note MM.

<sup>2</sup> See below, Note NN.

<sup>3</sup> See below, Note DD.

<sup>4</sup> See above, § 71, and below, § 81.

<sup>5</sup> See above, § 74.



and without any palpitation of the heart or nausea, let the patient take the following medicine:—

[*Form. 33.*]<sup>1</sup> Take of Lac five drachms,

Lentiles, peeled and washed, ten drachms,

Gum Tragacanth, three drachms;

Boil them in half a pint of water until only the half of that quantity remains; then strain the liquid, and give it the patient to drink.

His food should be such as is given in cases of acute disease; and the bowels should be kept open, if necessary, during the first week, with “Aqua Fructuum”<sup>2</sup> but after that time  
p. 250. you should avoid opening the bowels, and rather let his food incline to such as is astringent, because a diarrhoea sometimes ensues. In the winter<sup>3</sup> light a fire of tamarisk, vine and oak; and when you see the pustules are drying up, smear the body with a feather dipped in a mixture made of rice meal and millet with a little saffron in rose-water. If any pustules come out in the nostrils, drop into them cerate made with oil of violets; and treat the mouth in the same way. The patient should not eat young birds<sup>4</sup> until the pustules are dried up and no fever remains. Do not apply oil<sup>5</sup> to the patient’s body either in the beginning of the disease or towards the end, especially in the beginning, because there is some fear of its driving the eruption inwards, and hindering the breathing,<sup>6</sup> so as to occasion palpitation of the heart and death.”

(81.) Al-Yehúdí<sup>7</sup> says:—“Yellow boils<sup>8</sup> indicate the presence of yellow bile,<sup>9</sup> and those that are greenish and black indicate

<sup>1</sup> See above, *Form. 23.*

<sup>2</sup> See above, p. 109, Note (<sup>4</sup>), and below, p. 131.

<sup>3</sup> See above, §§ 32, 40, and below, § 81.

<sup>4</sup> See above, § 35.

<sup>5</sup> See above, § 61.

<sup>6</sup> This differs somewhat from the Latin version, which has, “quoniam prohibet earum exitum, et reddit eas profundas.” The word **لهم** *lahmá*, signifies, according to Castell (*Lex. Heptagl.* p. 1878.) “anhelitus, oscitatio, systole, diastole: spiritus exspiratus et inspiratus;” but the Translator is not quite satisfied as to the meaning of the passage.

<sup>7</sup> See below, Note Z.

<sup>8</sup> The Arabic MS. (p. 102. l. 11.) has **اليرشكين** *al-yerashcín*, which may perhaps be a corruption for **ورشكين** *werashcín*. (See below, Note J.) The Latin version has “blactiae seu morbilli.”

<sup>9</sup> See above, Note (<sup>2</sup>), p. 39.



a vehement adustion of the blood ; and these latter are mortal. The same may be said of the Small-Pox.<sup>1</sup> When the fever commences<sup>2</sup> with heat, head-ache, pain in the throat, p. 251. cough, redness of the face and eyes, sneezing, itching of the nose, and perspiration about the body, the Small-Pox will certainly come out ; and this happens for the most part on the third day, when the fever is mild, and sometimes it breaks out on the first or second. The Measles are less elevated<sup>3</sup> than the Small-Pox, and the Small-Pox is more injurious to the eye, especially when the pustules are small and close together. Rub up cuhl in milk, and then make it into a collyrium with camphor. On the seventh day<sup>4</sup> sprinkle on the patient water with salt and a little saffron, and afterwards roses, sanders, lentils and a little common camphor. At the commencement of the disease he should not drink anything cold, for this would retard the superfluous humours and hinder their coming out speedily ; but let him have sweet fennel-water and smallage-water, and sugar, in order to hasten the eruption from the interior ;<sup>5</sup> and let him rinse his mouth with pomegranate juice in order that he may have no pain in his mouth and throat, and that no pustules may come out in them. After their appearance let him take troches of the roasted seed of broad-leaved dock and flea-wort ; and if his throat be in pain, give him butter. In the winter<sup>6</sup> let there be constantly kept in his room a fire lighted with tamarisk, and when the pustules abound with too much moisture, let him sleep upon a mattress of fine texture stuffed with rice meal. The pustules p. 252. which come out after the fever<sup>7</sup> are less dangerous than

<sup>1</sup> See above, § 53.

<sup>2</sup> See above, § 80, and below, § 82.

<sup>3</sup> The Translator believes this to be the meaning of the word **اقل** *akall*, in this passage. It occurs in the same sense in Avicenna, (*Canon*. iv. 1, 2, vol. ii. p. 36. l. 26, ed. Arab.) where in the Latin version (vol. ii. p. 72, cap. 8.) the context is "non est ei (sc. *Morbillo*) altitudo de qua curetur, proprie in principio sui. Variolae vero in principio suae apparitionis est eminentia et altitudo ; et Morbillus est minor Variolis, et minus accidit oculo quam Variolae."

<sup>4</sup> See above, § 44.

<sup>5</sup> See below, § 82.

<sup>6</sup> See above, § 80, and below, § 89.

<sup>7</sup> See above, § 5.

those which precede it. In the Measles the saliva is thick, the eye and face red,<sup>1</sup> the tongue dry, the veins of the forehead turgid, and there is nausea: and the Measles come out all at once, but the Small-Pox gradually. The Measles that are violet coloured or green are fatal, especially if they sink in suddenly, and the patient is seized with anxiety and swooning; so be on your guard. In the Small-Pox, when the pustules are black, dry, numerous, covering almost the whole body, and warty, the disease is fatal. When the pustules are moist let them be fumigated with myrtle leaves; and wash the marks of the Small-Pox with powdered reed roots in water, and powdered willow stalks, and litharge."

(82.) Georgius<sup>2</sup> says:—"The Small-Pox and Measles break out when blood has not been taken from the patient for some time, and it is corrupted, and much inflamed, and especially when the south winds prevail.<sup>3</sup> They are preceded by p. 253. an acute fever, with violent pain and heaviness of the head, redness of the face, cough, dryness of the tongue and saliva; the veins of the whole face are swollen and inflated; the saliva is thick and viscid; and there comes on an itching of the nose, sneezing, redness of the eyes, with itching and a flow of tears, and puffiness of the face; the breathing is impeded, and there is disturbance of mind, vomiting, loss of appetite, and a feeling of heaviness in the whole body.<sup>4</sup> When you see these symptoms, or part of them, the Small-Pox or the Measles will certainly appear. And sometimes when they appear the fever is obstinate, and the disease is more violent and difficult to treat; and at other times when they appear, the fever is diminished: the Measles are less elevated than the Small-Pox.<sup>5</sup> You should not treat these diseases with very cold remedies, for this would be injurious; but, if it be winter, give the patient the expressed juice of sweet fennel

<sup>1</sup> See above, §§ 6, 53, and below, § 82.

<sup>2</sup> See below, Note GG.

<sup>3</sup> See above, §§ 18, 53.

<sup>4</sup> See above, § 81.

<sup>5</sup> See above, Note (3), p. 126. The words "than the Small-Pox" do not occur in the Arabic MS. (p. 103. l. 20.), and the whole clause is wanting in the Latin Translation. The Translator is, however, in doubt about the meaning of the whole of this sentence.

and smallage, and rosed honey;<sup>1</sup> and if the season be warm, give him barley-water, lentils, melons, pomegranates, p. 254. and the like. Let him keep in his mouth every day the expressed juice of sweet fennel, with saffron, and white sugar-candy; drop caviare into his eye, in order to prevent the pustules from coming out in it,<sup>2</sup> and use a collyrium<sup>3</sup> of antimony and common camphor. He is not to eat acid or salt food, or condiments, for fear of bringing on cough and thirst, nor the julep,<sup>4</sup> that his bowels may not be relaxed; and if any diarrhoea should come on, give him the inspissated juices<sup>5</sup> of myrtle and quinces in cold water, with troches of tabasheer. If bleeding at the nose comes on, it is a favorable crisis.<sup>6</sup> When you see the Measles of a violet or greenish colour suddenly sink into the interior of the body, you may be sure that swooning will come on and that the patient will die.<sup>7</sup> When the pustules of the Small-Pox are small, dry, close together; when they are not soon filled with fluid, or not at all; and when they are hard like warts and break; there comes on swooning, anxiety, and delirium."

(83.) He also says:—"When the patient has too much moisture in the pustules let him sleep upon a bed of fine texture stuffed with rice meal, or millet meal,<sup>8</sup> and let him be fumigated with dried myrtle leaves and olive leaves. p. 255. And when the ulcers are dry you should take pounded reed roots or willow stalks, mix them in water, and anoint the

<sup>1</sup> **جُلَانْجَبِين** *Julanjabin*, composed of two Persian words, signifying *rose* and *honey*. See Castelli *Lex. Heptagl.* p. 560; and compare above, p. 41, Note (4), and p. 68, Note (1). Its composition is given by Avicenna, v. 1. 7. vol. ii. p. 220. l. 35. ed. Arab., vol. ii. p. 300, ed. Lat. (p. 139, in Sontheimer's *Zusammengesetzte Heilmittel der Araber*). Ibn Baïfâr merely says (vol. i. p. 255) that it consists of roses and honey or sugar.

<sup>2</sup> See above, § 16.

<sup>3</sup> See above, p. 105, Note (2).

<sup>4</sup> See above, p. 65, Note (1). Here it seems to signify some particular laxative medicine.

<sup>5</sup> See above, p. 38, Note (3).

<sup>6</sup> See above, § 53.

<sup>7</sup> See above, § 81, and below, § 85.

<sup>8</sup> See above, § 81, and below, § 87.

patient with it, or else anoint him with washed litharge, in order to prevent the appearance of any scars."<sup>1</sup>

(84.) Ateuriscus (?)<sup>2</sup> says:—"Propolis<sup>3</sup> mixed with barley, and applied to the pustules, removes (?) them."

(85.) Ahrún<sup>4</sup> says:—"The most curable sort [of Small-Pox] is the white and red;<sup>5</sup> the most dangerous is the black, then the greenish, and next to that the yellow. When you see that the fever is lessened upon the breaking out of the Small-Pox or Measles, it is a favorable sign; but when the fever is aggravated, it is fatal."

(86.) He says also:—"When you know that the Small-Pox is beginning to break out, do not give the patient a cold medicine, which would tend to keep back the pustules in the interior; but let him have sweet fennel and smallage, in order to bring them out to the surface:<sup>6</sup> and let him rinse his mouth  
p. 256. with a decoction of lentils and sumach, in order that none may come out in his mouth and throat, and hurt them."

(87.) He says also:—"When the pustules are ripened, let the patient sleep upon rice meal, and fumigate him with myrtle and olive leaves, so as to dry them up."<sup>7</sup>

(88.) The Small-Pox arises from a fermentation that takes place in the blood, when it is undergoing the change from that of an infant to that of a young man;<sup>8</sup> and it is accompanied by great heat and a disagreeable odour;<sup>9</sup> and this is when the

<sup>1</sup> See above, §§ 53, 81.

<sup>2</sup> See below, Note OO.

<sup>3</sup> وسخ الكورات *Wasachu-l-cúwárát* (of which words the latter is sometimes found written rather differently), literally, *the dirt of bee-hives*. It is mentioned by Avicenna, *Canon*, iii. 3. 3. 14 : 14. 3. 12; vol. i. pp. 554, 772. ed. Lat., vol. i. p. 346. l. 23, p. 468. l. 10. ed. Arab.; who in another place (ii. 694. vol. i. p. 356. ed. Lat., vol. i. p. 208. ed. Arab.) says that it is black wax, or propolis, and enumerates its medicinal qualities. See Castell, *Lex. Heptagl.* p. 1705.

<sup>4</sup> See below, Note BB.

<sup>5</sup> See above, § 82.

<sup>6</sup> See above, § 82.

<sup>7</sup> See above, § 83.

<sup>8</sup> See above, Chap. I. § 5, &c.

<sup>9</sup> The word سهولة *Suhulah*, in the Arabic MS. (p. 105. l. 1.) is probably a mistake for سهوكه *Sahucah*, which appears to have been the reading of the Latin Translator, as he renders it "malus odor."



patient is of a hot temperament. The disease sometimes happens twice or even three times to the same individual, but generally once, especially to males, for the blood of infants must necessarily undergo this change.<sup>1</sup> Care must be taken in the spring and winter of those children who are of a habit of body disposed to the Small-Pox and Measles, that they may not be seized by an acute fever; the commotion of the blood must be quieted, and the heat extinguished as much as possible; and the food must be light, and such as generates thin blood. Take care that the pores of the body be kept open by friction, exercise, and baths; but in the autumn and summer there is not so much occasion for this, as in the summer much of the body is dissolved, and in the autumn the blood is p. 257. scanty. The children that are disposed to the Small-Pox and Measles are those that are pale, or ruddy, and fat, and light haired; but those that are lean and swarthy are but little subject to them.<sup>2</sup>

(89.) Ibn Serapion<sup>3</sup> says:—"If the strength of the patient will allow it, nothing is better in the Small-Pox than to bleed him till he faints; but if not, then let him be cupped.<sup>4</sup> Drop into his eyes a decoction of sumach or the pulp of pomegranates; and when the pustules begin to appear, give him a decoction of lac until the whole come out, after which let him have to drink barley-water and lentils, and Indian peas and the like to eat.<sup>5</sup> In the winter light a fire with the wood of tamarisk and vine;<sup>6</sup> and when the pustules are dry smear over him the meal of rice and millet, and the roots of Persian reeds, and saffron, moistened with rose-water."

<sup>1</sup> The Translator is not quite satisfied as to the meaning of this passage, which differs slightly from the Latin version.

<sup>2</sup> See above, Chap. II. § 1, &c.

<sup>3</sup> See below, Note EE.

<sup>4</sup> See above, § 49.

<sup>5</sup> See above, § 35.

<sup>6</sup> See above, § 81.



A female patient, who was accustomed to drink camel's milk without my advice, and had become inflated by it took some musk, without having been previously blooded or purged. Thereupon she fell into a continued fever, symptoms of the Small-Pox appeared, and after four days the pustules broke out. At the commencement of the disease she intrusted herself to me; so I immediately took care of her eyes, and strengthened them by a collyrium of cuhl rubbed up in rose-water. In consequence of this not a single pustule

p. 259. came out in her eyes, though they were very thick all around; so that the old women who were waiting upon her were astonished at her eyes being preserved. I made her take barley-water and the like for some time; and as her bowels were not relaxed, as is the case at the end of this disease, and she had still some remains of ardent fever, I conjectured this to be the effect of the residue of the humours that did not pass off by the bowels, as usual. I could not venture to bring this away all at once on account of her weakness; so I made her take the "Aqua Fructuum"<sup>2</sup> in the morning, and barley-water in the afternoon, for a fortnight, which occasioned two motions every day, and a complete purgation. After forty days there appeared a perfect coction in the urine, and after fifty the patient was quite recovered.

<sup>1</sup> This passage is to be found in pp. 5, 6, of the Arabic MS.

<sup>2</sup> See above, p. 109, Note (4).



NOTES AND ILLUSTRATIONS.



## NOTES AND ILLUSTRATIONS.

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(NOTE A. p. 23.)

THE Arabic word here translated "Small-Pox" is <sup>و</sup>جدري *Jadari*, which sometimes signifies the disease itself, sometimes the variolous pustules. The word, however, seems to have been used somewhat vaguely and incorrectly, as it was considered to be synonymous with the Greek words ἰονθος, ἔρπης, and νομαί, as will appear below.<sup>1</sup> It is rendered by the Greek translator Λοιμική,<sup>2</sup> there being no word in the old Greek language that signifies Small-Pox,—a fact which helps in some degree to prove that the disease was unknown in Europe before the date usually assigned to its appearance. In modern Greek, according to Villosion,<sup>3</sup> "εὐλογία, et au pluriel, ἡ εὐλογιαῖς veut dire *la Petite Vérole*. Les Grecs, aujourd'hui, n'ont pas d'autre terme pour exprimer cette maladie." (See *Henr. Stephani Thesaur. Graec. Ling.*, ed. Paris.)

The Arabic word for Measles is حصبه *Hasbah*, which is rendered in the Greek translation by Εὐλογία,<sup>4</sup> a barbarous word, which is not used by any ancient writer, and which (as we have just seen) is used by the modern Greeks to signify the Small-Pox. The Greek translator has the following note on the word (p. 246):—Εὐλογίαν δ'ὠνόμασαν οἱ παλαιοὶ τὸ ἐν εἶδος τὸ μοχθηρότερον τῶν δύο, καθὰ καὶ παρὰ πολλῶν

<sup>1</sup> See Notes D, E, and HH.

<sup>2</sup> So too in the Greek work that bears the title "*Synesium De Febribus*," which is in fact translated from the Arabic. See above, Note (1) p. 24.

<sup>3</sup> *Notices et Extraits des MSS. de la Bibliothèque Nationale*, &c. tome vii. pt. ii. p. 236.

<sup>4</sup> This shows that there is no occasion for the conjectural emendation of εὐφλογία or ἐκφλογία, adopted by Freind (*Hist. of Physic*, vol. ii. p. 192), and Mason Good (*Nosology*, p. xlv. note).



οἷτως ὀνομάζεσθαι ταύτην ἀκούω· ἐν γὰρ ταῖς Ἑλληνικαῖς διαλέξεσι κλησὶς ταύτης οὐχ εὐρηται. Ὁ δὲ σοφὸς οὗτος ἀνὴρ τῇ ἰδίᾳ διαλέκτῳ χάσπε [i. e. حَصْبَة *Hasbah*] ὠνόμασε· δηλοῖ δὲ ἡ λέξις τὸ κατ' αὐτό. Οἶμαι δὲ ὅτι κατ' αὐτὴν τὴν λοιμικὴν ὁ λόγος βούλεται. Εἰ δὲ καὶ διαφέρουσιν ἀλλήλων ἐν ταῖς διαθέσεσιν, ἀλλ' οὖν καὶ κοινότητα ἔχουσι, καὶ οὐδὲν ἀπεικός· οὐδεν οὖν ἐστὶ διαφορὰν ἔχον, μὴ καὶ κοινότητα ἔχον. Ἄλλ' ἵνα μὴ περὶ τῶν ὀνομάτων τὸν καιρὸν διατρίψωμεν, τῶν σοφοῦ τούτου τὰς διαφορὰς κατὰ τὸν οἰκεῖον καιρὸν διασαφούντος, ἐπὶ τὸ προκείμενον τὸν λόγον ἐπανάξωμεν.

With respect to the modern use of the words جَدَرِيَّ *Jadari* and حَصْبَة *Hasbah*, the Translator was informed by a Syrian gentleman, who was lately studying Medicine in London, that by the former term in Syria and Egypt and other places is understood the *Small-Pox*, and by the latter the *Scarlatina*.<sup>1</sup>

(NOTE B. p. 23.)

“It is a universal custom of the Muslims to write this phrase at the commencement of every book, whatever may be the subject, and to pronounce it on commencing every lawful act of any importance. This they do in imitation of the Kurán, (every chapter of which, excepting one, [the ninth,] is thus prefaced,) and in accordance with a precept of their Prophet. The words which I translate *Compassionate* and *Merciful*, are both derived from the same root, and have nearly the same meaning: the one being of a form which is generally used to express an accidental or occasional passion or sensation; the other, to denote a constant quality: but the most learned of the 'Ulama (or professors of religion and law, etc.) interpret the former as signifying Merciful in *great* things; and the latter, Merciful in *small* things.” (Note in Lane's translation of “The Thousand and One Nights, commonly called in England, *The Arabian Nights' Entertainments*.” vol. i. p. 16.)

<sup>1</sup> It is due to Mason Good's reputation as a scholar to correct some of his errors, and therefore it may not be out of place to mention, 1. that نَبِيح *nabach* is not “the Arabic term [i. e. the common authorized name] for the Small-Pox;” 2. that حَصْبَة *hasbah* is the Arabic name for the Measles, *not* for the Small-Pox; and 3. that the Syriac and Chaldee criticisms in the note referred to (*Nosology*, p. xlv) cannot be depended on. In fact the first two points are at variance with what he himself (correctly) states in a later part of the same work (pp. 210, 222), and also in his *Study of Medicine*, vol. iii. pp. 25, 83, 87. (ed. 3rd.)

(NOTE C. p. 23.)

The full and complete name of the physician commonly called *Rhazes* was Abú Beer Moḥammed Ibn Zacaríyá Ar-Rází,<sup>1</sup> **ابو بكر محمد بن زكريا الرازي**. He was a native of Rai,<sup>2</sup> a town in the north of 'Irák 'Ajemí, near Chorásán, probably about the middle of the ninth century after Christ, but the exact year of his birth is not ascertained. "In his youth," says Ibn Juljul,<sup>3</sup> "he played on the lute and cultivated vocal music; but, on reaching the age of manhood, he renounced these occupations, saying that music proceeding from between mustachios and a beard had no charms to recommend it. Having then applied himself to the study of medicine and philosophy, he read the works on these subjects with the attention of a man who seeks to follow the author's reasonings step by step; and he thus acquired a perfect acquaintance with the depths of these sciences, and appropriated to himself whatever truths were contained in the treatises which he perused. He then commenced attending the sick, and composed a great number of books on medicine." According to Abú-l-Fedá<sup>4</sup> and Ibn Khallikán,<sup>5</sup> he was more than forty years old when he began to study medicine; his tutor in the healing art being At-Tabarí.<sup>6</sup> He was at first physician to the hospital in his native place, and afterwards to that at Bagdád. He travelled much, and visited both Jerusalem and Africa. He is said also by Leo Africanus<sup>7</sup> to have visited Spain, where, in passing through the streets of Cordova, he saw a crowd collected round the body of a man who was said to have just fallen down dead. He caused him to be beaten all over with rods, and particularly on the soles of his feet, by which means, in less than a

<sup>1</sup> As is the case with many of the Arabic physicians, his names have been so disfigured as to be sometimes almost impossible to be recognised. It may therefore be useful to mention, that (besides having his more common name spelled *Rasaeus*, *Rases*, *Razeus*, *Razi*, *Rhazeus*, *Rhazis*, *Arrasi*, *Errasis*, &c.,) he is also sometimes called *Abubeter*, *Albubecar*, *Albubeter*, *Abubater*, *Abuchare*, *Bubikir*, &c.

<sup>2</sup> Hence his name *Ar-Rází*. See Ibn Khallikán's *Biograph. Dict.* by De Slane, vol. i. p. 101.

<sup>3</sup> Quoted by Ibn Khallikán, vol. iii. p. 319.

<sup>4</sup> *Annal. Muslem.* vol. iii. p. 346.

<sup>5</sup> vol. iii. p. 320.

<sup>6</sup> Some account of this physician is given below, Note AA.

<sup>7</sup> *De Viris Illustr. ap. Arab.* cap. 6, in Fabricii *Biblioth. Graeca*, vol. xiii. p. 266, ed. vet.

quarter of an hour, he restored him to animation. Upon being questioned about this singular remedy, he said that he had seen it used with success in a similar case by an old Arab; and added that "experience is of more use than a physician." He is said to have been the ablest and most distinguished physician of his age;<sup>1</sup> a perfect master of the art of healing, skilled in its practice and thoroughly grounded in its principles and rules: so that pupils travelled from distant countries to receive the benefit of his tuition. Ibn Juljul (as quoted by Ibn Khallikán)<sup>2</sup> relates that Rhazes composed for the same Al-Mansúr,<sup>3</sup> to whom he dedicated his "*Liber ad Almansorem*," a treatise in which he endeavoured to establish the certainty of alchemy, and that he set out from Bagdád in order to present it to him. Al-Mansúr testified great satisfaction on examining the work, and, having rewarded the author with a thousand dinars,<sup>4</sup> he said to him, "I wish you to put in practice what you have laid down in this book." "That is a task," replied Rhazes, "for the execution of which ample funds are necessary, as also various implements and aromatics of genuine quality; and all this must be done according to the rules of art, so that the whole operation is one of great difficulty." "All the implements that you require," said Al-Mansúr, "shall be furnished to you, with every object necessary for the operation; so that you may put in practice the rules contained in your book." Perceiving the prince to be in earnest, Rhazes hesitated to undertake the task, and declared his inability to perform it; upon which Al-Mansúr said, "I should never have thought a philosopher capable of deliberate falsehood in a work represented by him as a scientific treatise, and one which will engage people's hearts in a labour from which they can derive no advantage. I have given you a thousand dinars as a reward for this visit and the trouble you have taken, but I shall assuredly punish you for committing a deliberate falsehood." He then struck him on the head with a whip, and sent him off to Bagdád, with a stock of provisions for the journey. This blow was considered to have been the occasion of the formation

<sup>1</sup> Ibn Khallikán, p. 319.

<sup>2</sup> p. 320.

<sup>3</sup> See above, p. 82, and below, Note W.

<sup>4</sup> The *dinar* (connected etymologically with the Greek *δηνάριον* and the Latin *denarius*,) was a gold coin which differed in value under different sovereigns and in different countries, as it was sometimes equal to twenty dirhems, and at other times to twenty-five. Its exact value in Chorásán, in the time of Rhazes, the Writer has not been able to ascertain; but, if we reckon the dinar at the medium value of ten shillings, the sum given to Rhazes would amount to five hundred pounds.

of a cataract,<sup>1</sup> which afterwards rendered Rhazes completely blind; though some writers<sup>2</sup> attribute the failure of his sight to the quantity of beans he was accustomed to eat. He was at first inclined to have an operation performed on his eyes; but, when the surgeon who came to perform it could not tell him how many membranes the eye contained, he refused to let him touch them; and when some one represented to him, that, if he would allow the operation to be performed, he might probably recover his sight, he said, "No, for I have seen so much of the world that I am weary of it." He died at an advanced age, either A. H. 311<sup>3</sup> (A. D. 92 $\frac{3}{4}$ ) or perhaps more probably A. H. 320<sup>4</sup> (A. D. 932.)

He was a person of studious and industrious habits, and of a remarkably generous and liberal disposition, so much so, that, while he frequently relieved the wants of his poorer patients, he himself lived and died in comparative penury. Several of his sayings have been preserved by his biographers: e. g. "When you can cure by regimen, avoid having recourse to medicine; and when you can effect a cure by means of a simple medicine, avoid employing a compound one;" and again, "With a learned physician and an obedient patient, sickness soon disappears;" and again, "Treat an incipient malady with remedies which will not prostrate the strength;" and<sup>5</sup> again, "If Galen and Aristotle are of one and the same opinion, it is certainly correct; but if they differ, it is very difficult to determine which is in the right;" and again, "Truth and certainty in Medicine is an aim which is not to be attained; and the healing art, as it is described in books, is far inferior to the practical experience of a skilful and thoughtful physician."<sup>6</sup> One day when he was walking with some of his pupils he met a madman in the street, who, after looking fixedly at him, burst into a fit of laughter. Upon his return home Rhazes immediately prepared a dose of dodder of thyme<sup>7</sup> and took it; and, when his pupils

<sup>1</sup> نزول الماء, *Nuzúlu-l-má*, literally, a descent of water or humour. See Rhazes, *Almans*. x. 27; Avicenna, vol. i. p. 352, ed. Arab.; Albucasis, *De Chirurg.* ii. 23. p. 168.

<sup>2</sup> Abú-l-Faraj, *Hist. Dynast.* p. 292; Anon. *Arab. Philosoph. Biblioth.* in Casiri *Biblioth. Arabico-Hisp. Eскур.* vol. i. p. 264.

<sup>3</sup> Ibn Khallikán, and Abú-l-Fedá, *locis cit.*

<sup>4</sup> Abú-l-Faraj, and Anon. *Arab. Philosoph. Biblioth.*, *locis cit.*

<sup>5</sup> Ibn Khallikán, *l. c.*

<sup>6</sup> Wüstenfeld, *Gesch. der Arab. Aerzte*, p. 42. This last aphorism seems rather at variance with the opinion quoted above (pp. 79, 80,) from his *Liber ad Almansorem*.

<sup>7</sup> "Epithym," i. e. *Ἐπιθυμῶν*, (*Cuscuta Epithymum*, Linn. See Dioscor. *De Mater. Med.* iv. 176. vol. i. p. 670; Galen, *De Simplic. Medicam. Temper. ac Facult.*



asked him why he took this medicine at a time when he seemed to be in no need of it, he replied, "Because the madman just now laughed when he saw me, which he would not have done if he had not seen in me some traces of the bile by which he is himself oppressed: birds of a feather flock together."<sup>1</sup>

Rhazes was a very voluminous writer, and, though he was a native of Persia, his works were composed in the Arabic language. Some of them related to different philosophical subjects, but the greater part were short medical treatises. The titles of two hundred have been preserved, but of these perhaps it will only be necessary to enumerate in this place the names of those which have been already published, or which still exist in MS. in some of the European Libraries. The treatise "De Variolis et Morbillis" is the only one that has hitherto been published in Arabic. The following list is abridged from Wüstenfeld's *Geschichte der Arabischen Aerzte und Naturforscher*, p. 42, &c., where a complete catalogue of the works of Rhazes is to be found.

1. "Al-Háwí," or "Continens," his chief work, of which some account is given above, p. 99.
2. "Al-Manşúrí," or "Liber ad Almansorem;" see above, p. 77.
3. "De Variolis et Morbillis;" see above, p. 3.
4. "Antidotarium."
5. "Divisio Morborum," or "Divisiones;" see above, p. 89.
6. "Introductio in Medicinam."
7. "Aphorismi Medici," or "Director."
8. "Sufficiens."
9. "Fundamenta Medicinæ, de Morbis qui intra Horam sanari possunt."
10. "De Coitu."
11. "De Proprietatibus Rerum."
12. "De Hieris."
13. "De Permutatione Medicamentorum aliorum aliis."
14. "Secretum Artis."
15. "Liber Pretiosus, de Morbis Particularibus Membrorum a Vertice, ad Pedes."
16. "De Colica."
17. "Quæstiones Medicæ."
18. "Liber Medicinæ Regius."
19. "De Cibis et Medicamentis."

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vi. 5. § 14. vol. xi. p. 875:) in Arabic **أفیتمون** *Afitimún*, or **افشيمون** *Afthimún*. (See Ibn Baitár, vol. i. p. 57; Avicenna, vol. i. p. 130. ed. Arab., lib. ii. cap. 228. vol. i. p. 310. ed. Lat.) Among the properties ascribed to dodder of thyme is that of purging off yellow bile.

<sup>1</sup> Galand, *Paroles Remarquables des Orientaux*, in the Supplement to D'Herbelot's *Bibliothèque Orientale*, p. 208, ed. 1780.



20. "De Arte Medendi Commentarii."
21. Commentary on Galen's treatises "De Compositione Medicamentorum."
22. "De Sanguinis Missionem."
23. "De Tumoribus."
24. "De Alimentorum Correctione."
25. "De Viris Frigidis et ad Venerem Ineptis, eorumque Curatione."
26. "De Immoderato Calore."
27. "De Pomorum ante vel post Cibus Esu."
28. "De Seminibus ac de Radicibus Aromaticis."
29. "De Fructuum Edendorum Tempore atque Ordine."
30. "De Vini Potu ejusque Speciebus."
31. "De Medicamentis Simplicibus."
32. "Quod nimis Thermarum Usus noceat."
33. "Liber Consiliorum."
34. "De Venae Sectione."
35. "De Accidentibus Homines avertentibus a Medicis doctissimis, et de eorum Fama Tuenda."
36. "Praeparatio Salis Armoniaci," to be found in the *Theatrum Chemicum*, Argent. 1659. vol. iii. p. 179.
37. "De Febribus," to be found in the Collection of ancient writers *De Febribus*, Venet. 1594. p. 99.

For further information respecting Rhazes and his works (besides the works of Freind, Haller, Sprengel, Wüstenfeld, &c.) the reader may consult Choulant's *Handb. der Bücherkunde für die Aeltere Medicin*; the *Biographie Universelle*; and the *Penny Cyclopaedia*.

(NOTE D. p. 27.)

In Arabic قاطاجانس *Kâtájánis*, i. e. *Karà Géros*, or the treatise "De Compositione Medicamentorum secundum Genera." This work was translated into Arabic by Hobaish Al-Á'sam, nephew and pupil of Honain Ibn Ishak, (commonly called *Joannitius*), in the ninth century after Christ;<sup>1</sup> and, as it appears (from § 2.) that Rhazes did not himself understand Greek, it is probable that he made use of this translation.

The passage of Galen's work here quoted is supposed (with great probability,) by Channing to be the following: *ἔστι δὲ καὶ τοῖς ἰοῦθοις τὸ φάρμακον χρῆσιμον*, (i. 14. tom. xiii. p. 421.) in which we must suppose that the Arabic translator rendered *ἰοῦθος* by *جدري* *Jadari*.

<sup>1</sup> See Wüstenfeld, *Geschichte der Arab. Aerzte*, § 72. p. 30; J. G. Wenrich, *De Auctorum Graecorum Versionibus et Commentariis Syriacis, Arabicis, Armeniacis, Persicisque*, Lips. 1842. p. 247.

But that this was a mistranslation is abundantly clear both from the common use of the word in the Greek medical writers, and also from the definitions that are given. It is first used by Hippocrates,<sup>1</sup> and Aristotle;<sup>2</sup> and is also found in Aretaeus,<sup>3</sup> and Dioscorides.<sup>4</sup> Galen defines it to be "a small hard tumour, which arises on the skin of the face, containing a thick humour."<sup>5</sup> Celsus<sup>6</sup> and Pliny<sup>7</sup> mention the affection under the name *Varus*; and a further account of it may be found in Oribasius,<sup>8</sup> Aëtius,<sup>9</sup> Paulus Aegineta,<sup>10</sup> (where Dr. Adams, by some oversight, translates it "vari or warts," though in his Commentary (p. 454) he says correctly that "ἰορθος is the *acne* of Drs. Willan and Bateman,") Theophanes Nonnus,<sup>11</sup> and Joannes Actuarius.<sup>12</sup> If any one chooses to consult these passages, he will probably be convinced that the word ἰορθος in the old Greek writers (and especially in the passage of Galen quoted by Rhazes,) does not signify the Small-Pox, but what is commonly called in English *Whelk*, and *Stone-Pock*, and in scientific works *Acne*, comprehending apparently the two species, *Acne simplex*, and *Acne indurata*.

Mason Good in his *Study of Medicine* says that "ἰορθος is literally a violet, or purple eruption, or efflorescence, from ἰορ, *viola*, whose colour is frequently that of a whelky or bubukled face." This, however, is almost certainly a mistake, as the word is much more probably connected with ἄρθος, "because they occur about the flower of a man's age."<sup>13</sup> For the same reason the tumours were sometimes called ἀκμαί<sup>14</sup> because "they make their appearance about the time of bloom,

<sup>1</sup> *De Morb. Popul.* i. tom. iii. p. 413. ed. Kühn.

<sup>2</sup> *Hist. Anim.* v. 31. § 2; *Problem.* 34. 4: 36. 3.

<sup>3</sup> *De Sign. Morb. Chronic.* ii. 12, 13. pp. 172, 181; *De Curat. Morb. Chron.* i. 2, ii. 5. pp. 299, 334. ed. Kühn.

<sup>4</sup> *De Mater. Med.* i. 40. vol. i. p. 50. ed. Sprengel.

<sup>5</sup> *De Compos. Medicam. sec. Locos*, v. 3. tom. xii. p. 822, 23. See also Galen, *De Remed. Parab.* i. 6. tom. xiv. p. 352; Caelius Aurelianus, *De Morb. Acut.* ii. 10. p. 102.

<sup>6</sup> *De Med.* vi. 5. p. 312. ed. Argent.

<sup>7</sup> *Hist. Nat.* xxii. 73: xxiii. 14, 42, 45. ed. Tauchn.

<sup>8</sup> *Synops. ad Eustath.* viii. 34. p. 128; *Ad Eunap.* iv. 51. p. 652. ed. H. Steph.

<sup>9</sup> *De Medic.* viii. 13. p. 152 B. ed. Gr., p. 372. ed. Lat. H. Steph.

<sup>10</sup> iii. 25. p. 38. ed. Gr., p. 444. ed. Lat. H. Steph.

<sup>11</sup> *Epit. de Curat. Morb.* tom. i. p. 322. ed. Bernard.

<sup>12</sup> *De Diagn.* ii. 13. p. 451. ed. Gr. (in Ideler's *Phys. et Med. Graeci Min.* vol. ii.), or *De Meth. Med.* ii. 9. p. 185, vi. 6. p. 311. ed. Lat. H. Steph.

<sup>13</sup> Scholiast on Theocritus, *Idyll.* xii. 24.

<sup>14</sup> Aëtius, *loc. cit.*

or *vigour*, ἀκμῆς.”<sup>1</sup> The modern scientific name, *Acne*, is generally stated to be a Greek word, ἄκνη; but this is (to say the least,) extremely doubtful, as the word is not to be found in the new edition of H. Stephani *Thesaur. Graec.*, and the only passage quoted by Du Cange<sup>2</sup> where it occurs is that of Aëtius referred to above, where it is manifestly a mere error of the press for ἀκμή. And therefore it seems probable that this typographical error in the Aldine edition of Aëtius is the sole origin of the term, which is now too commonly used to be ever altered.

## (NOTE E. p. 27.)

That is, what is now commonly called the second book of the treatise “De Praesagitione ex Pulsibus.” Though Galen’s works entitled “De Differentia Pulsuum,” “De Dignoscendis Pulsibus,” “De Causis Pulsuum,” and “De Praesagitione ex Pulsibus,” are now always quoted as four distinct treatises, Galen himself speaks of them as merely the four parts of one long work consisting of sixteen books,<sup>3</sup> and so they appear to have been considered by the Arabic writers. This work also was translated into Arabic by Hobaish Al-’A’sam.<sup>4</sup>

The passage quoted by Rhazes appears to be the following:.....ἐν δὲ τῷ μεταξὺ τούτων ἐφ’ αἵματι· καὶ γὰρ καὶ τοῦτο σήπεται κατὰ τὰς φλεγμονὰς, ἐφ’ αἷς πυρέττουσι, τὰς τε ἄλλας καὶ ὧν ἡ φλόγῳσις εἰς τοσοῦτον ἄμετρος ὥς κατακαίειν τε τὸ δέρμα καὶ πάθος ἐργάζεσθαι τὸ προσαγορευόμενον ἄνθρακα. τῆς αὐτῆς δὲ πῶς εἰσι φύσεως καὶ οἱ μετὰ ἀναβρώσεως ἔρπητες, οὓς ἐσθιομένους Ἱπποκράτης ὠνόμαζεν. (ii. 1. tom. ix. p. 273.) As the above passage is not rendered quite literally by the Arabic translator, it is difficult to decide with certainty which is the word that he supposed to mean the *Small-Pox*, but upon the whole it seems most probable that it is ἔρπητες. This word occurs several times in different treatises of the Hippocratic Collection,<sup>5</sup> but without any detailed description of the disease. Galen mentions it frequently and at length: it is, according to him, an eruption of small vesicles on the surface of the skin, filled with an acrid bilious secretion, consisting of three species; the first containing a thick fluid, so acrid as to ulcerate

<sup>1</sup> Cassius Felix, *Problem. Phys. et Med.* § 33. p. 155. ed. Gr. (in Ideler’s *Phys. et Med. Graeci Min.* vol. i.), p. 760. ed. Lat. H. Steph. See also Julius Pollux, *Onomast.* iv. § 194.

<sup>2</sup> *Glossar. Med. et Infim. Graecit.*

<sup>3</sup> *De Arte*, c. 37. tom. i. p. 410.

<sup>4</sup> See Wenrich, *De Auct. Graec. Vers. &c.* p. 251.

<sup>5</sup> *Prorrhet.* ii. tom. i. p. 204, 207; *De Liquid. Usu*, tom. ii. p. 163; *De Morb. Popul.* ii. 3: iii. 3. p. 449, 487; *Aphor.* v. tom. iii. p. 742.

the whole of the skin down to the flesh below, and called by Hippocrates *ἔρπης ἐσθιόμενος* (*Herpes Exedens*); the second containing a milder and more aqueous fluid which only burns as it were or corrodes the surface of the skin, called simply by the generic name *ἔρπης*; and the third containing a still less hot and acrid fluid, and called *κεγχρίας* (*Herpes Miliaris*) from exciting numerous small vesicles on the surface of the skin like millet seeds.<sup>1</sup> Aëtius follows Galen in his account of the disease,<sup>2</sup> but most succeeding writers omit the second species, and thus recognize only two.<sup>3</sup> Pliny mentions the disease apparently under the name *Zoster*, which, however, he makes a species of *erysipelas*.<sup>4</sup> Scribonius Largus<sup>5</sup> and Marcellus<sup>6</sup> call it "Zona."

From the use of the word *ἔρπης* in these passages, and others that might be adduced, it will appear that it did not signify the Small-Pox, but rather the genus of eruptions which still bears the same name, comprehending probably the species *Herpes Miliaris*, *Herpes Exedens*, and *Herpes Zoster*, of some modern writers.

The name is derived from *έρπω*, because of the serpentine direction in which the eruption *creeps along*; whence it is apparently mentioned by Pliny<sup>7</sup> under the names *ulcera manantia*, and *ulcera serpentia*. It may be added that in some editions of Celsus,<sup>8</sup> the term *ἔρπης ἐσθιόμενος* occurs, but Targa in his edition has changed this reading into *φαγέδαινα*, as has been noticed by Mason Good in his *Nosology* (p. 479) and his *Study of Medicine*.

<sup>1</sup> *Ad Glauco. de Meth. Med.* ii. i. tom. xi. p. 74. See also *De Meth. Med.* xiv. 16. tom. x. p. 1005, &c.; *De Tumor. praet. Nat.* c. 9. tom. vii. p. 722; and numerous other passages in his works.

<sup>2</sup> iv. 2. 60. p. 727. ed. Lat.

<sup>3</sup> See Oribasius, *Synops. ad Eustath.* vii. 33. p. 114; id. *Ad Eunap.* iii. 49. p. 635; Paulus Aegineta, iv. 20. p. 64 B. ed. Gr., p. 511. ed. Lat.; Theophanes Nonnus, c. 245. p. 249; Joannes Actuarius, *De Diagn.* ii. 32. p. 458. ed. Gr., or *De Meth. Med.* ii. 12. p. 189. ed. Lat.; Palladius, *De Febr.* c. 6.

<sup>4</sup> *Hist. Nat.* xxvi. 74.

<sup>5</sup> *De Compos. Medicam.* c. 13. § 62. p. 203. ed. H. Steph.

<sup>6</sup> *De Medicam.* c. 11. p. 292. ed. H. Steph.

<sup>7</sup> *Hist. Nat.* xxiv. 73; compare Dioscorides, *De Mater. Med.* iv. 37. tom. i. p. 533; and *Hist. Nat.* xxiv. 77; comp. Dioscor. i. 132. tom. i. p. 126.

<sup>8</sup> *De Medic.* v. 28. § 3. p. 288.



(NOTE F. p. 27.)

The Arabic word *حمرة* *Humrah*, which is in this and the two following sentences translated “erysipelas,” is rendered “carbuncle” by Stack, and “anthrax” by Channing. The Translator is, however, inclined to think that it rather means *erysipelas*, because it is undoubtedly used in this sense by Honain Ibn Ishak in his translation of the Aphorisms of Hippocrates,<sup>1</sup> and also by Avicenna.<sup>2</sup> The word occurs again below, *Cont.* §§ 54 bis, 63, (p. 96, l. 23 : 97. 2 : 98. 21. in MS. Arab.) in each of which passages it is rendered “erisipilla” in the old Latin Translation. It is true that the word *ἐρυσίπελας* does not occur in the Greek text of Galen in this quotation, but it does in the two following.

Probably, however, this word and others derived from the same root were not always used in the same definite sense, as the following passage from Haly Abbas would seem to indicate :—“The Small-Pox,” says he,<sup>3</sup> “are numerous small pustules (*بثور* *buthûr*<sup>4</sup>) affecting the whole or the greater part of the surface of the body, which the ancients called *حمر* *hamr*, but which the Syrians call “*Daughters of Fire*.” This last clause is translated by Constantinus Afer,<sup>5</sup> (who lived in the eleventh century, and who, from his having travelled in the East, was no doubt well acquainted with the Arabic language,) “*Antiqui vocant has Ignis carbones, Syri, Filias ignis.*”

(NOTE G. p. 27.)

This work was translated into Arabic by Hobaish.<sup>6</sup> The passage here quoted by Rhazes is in the original as follows :—*σήπεται τῷ χρόνῳ ταυτὶ τὰ συνεστῶτα περιττώματα, καὶ οὕτω δριμύτερά τε καὶ θερμότερα γινόμενα φλεγμονὰς καὶ ἐρυσιπέλας καὶ ἐρπητας καὶ ἀνθρακας καὶ πυρέτους καὶ μυρίων ἄλλων ὄχλον ἀποτίκει νοσημάτων.* (ix. l. tom. iii. p. 686.) In this passage, as in the last, it is not quite certain which

<sup>1</sup> “The Aphorisms of Hippocrates, translated into Arabic; by Honain Ben Ishak,” &c. Calcutta, 8vo. 1832. See p. 44. l. 8 : 47. 8 : 55. 14 : 61. 8 bis.

<sup>2</sup> tom. ii. pp. 63, 64. ed. Arab.; iv. 3. l. 4, 5. tom. ii. p. 112. ed. Lat.

<sup>3</sup> *Theor.* viii. 14. p. 97. ed. 1523. The writer has compared the old Latin Translation with an Arabic MS. of the original work in the Bodleian Library.

<sup>4</sup> See above, p. 32, Note (1).

<sup>5</sup> *Commun. Loc. Medic.* viii. 14. p. 226. See Willan's *Miscell. Works*, p. 19.

<sup>6</sup> See Wenrich, *De Auct. Graec. Vers.* &c. p. 245.



is the word that the Arabic translator rendered جَدَرِي *Jadari*, but here also it seems most probably to have been ἔρπησις. As, however, the word ἄνθραξ, which occurs in this and the preceding extract, has been supposed (and perhaps with more probability than any other term,) to signify the Small-Pox, it is necessary to examine into its meaning with some minuteness; in prosecuting which inquiry free use has been made of Willan's learned essay on "the Antiquity of the Small-Pox,"<sup>1</sup> and also of M. Littré's Argument to the second book of the "Epidemics" of Hippocrates.<sup>2</sup>

The word occurs several times in different treatises of the Hippocratic Collection. In giving a list of the diseases occurring under a pestilential constitution (κατάστασις λοιμώδης,<sup>3</sup>) the author of the third book of *Epidemics* (viz. Hippocrates himself) says,<sup>4</sup> "In summer there were many *Anthrakes*, and other affections called *seps* (σήψ) or *septic*; great pustular eruptions (ἐκθύματα); and in many cases great vesicular eruptions (ἐρπητες)." Willan thinks, that, being an Ionian, Hippocrates probably employs the term *Anthrakes*, as was usual in Asia Minor, to express a specific eruptive fever; and that the probability is confirmed by a passage in the second book of *Epidemics*, (which however was not the work of Hippocrates himself,) which begins thus:<sup>5</sup>—"Anthrakes appeared at Cranon, in a very hot and rainy summer, mostly with a south wind; ichors or humours (ἰχώρες) collected under the skin, and these, being confined, became hot, and excited itching; then there arose phlyctænae or blisters (φλυκταινίδες), as if caused by fire; and the patients experienced a sensation of burning under the skin." M. Littré, on the other hand, considers that we are not obliged to interpret the term to mean *several* "anthrakes" which appeared on one and the same person, but that it may equally well signify a single "anthrax" which broke out on several individuals. Two other passages in the Hippocratic Collection where the word occurs,<sup>6</sup> throw no more light on its precise meaning.

M. Littré proceeds to institute a careful and interesting comparison (too long to be extracted, and hardly admitting of abridgement,)

<sup>1</sup> *Miscellaneous Works*, p. 52, &c.

<sup>2</sup> *Œuvres d'Hippocrate*, tome v. p. 48, &c.

<sup>3</sup> This is the common reading (p. 481), but M. Littré omits the important word λοιμώδης (*Œuvres d'Hippocr.* tome iii. p. xxxvii. and Note (<sup>39</sup>) p. 66), and therefore no argument can be founded on the use of the term.

<sup>4</sup> *Epid.* iii. 3. § 1. vol. iii. p. 487.

<sup>5</sup> *Epid.* ii. 1. § 1. vol. iii. p. 428.

<sup>6</sup> *Epid.* iii. 3. § 3. vol. iii. p. 482: *De Affect.* vol. ii. p. 409.

between the passages relating to the "Anthrax" to be found in Galen and other ancient writers posterior to Hippocrates, and the descriptions of recent medical authors; from which he draws the conclusion (pp. 56, 57,) that in most cases the term signified the malignant carbuncle and malignant pustule of modern nosologists. Generally the "Anthrax" was single, and therefore bore little or no resemblance to the Small-Pox; occasionally, however, we meet with the mention of a carbunculous or anthrax-like eruption, which Willan and other eminent medical antiquaries believe to signify the disease in question. Thus Rufus Ephesus<sup>1</sup> (who lived in the first century after Christ) says that "in the plague or pestilence (λοιμός) all the most dreadful symptoms may occur, and nothing is withheld, as in any of the diseases singly.<sup>2</sup> The appearances are many and various; there are different kinds of delirium, vomitings of bile, tension of the hypochondria, a sense of anxiety, frequent sweats, coldness of the extremities, bilious diarrhoea, with thin flatulent discharges; the urine, in some cases thin and watery, in others bilious, in others black, with a bad sediment, and enaeoremata of the worst kind; haemorrhage from the nostrils, heats in the chest, a parched tongue, watchfulness, strong convulsions; and also there may take place in the plague evil ulcers, carbunculous or anthrax-like (ἀνθρακώδη), and most formidable, not only on the rest of the body, but also on the face and tonsils." Thus too Herodotus (who also lived in the first century after Christ,) when treating of the eruptions (ἐξανθήματα) in different kinds of fevers,<sup>3</sup> first mentions the herpetic or vesicular eruption about the nose and lips, considered as a frequent crisis of simple or catarrhal fever; and, secondly, the weals or molopes (μώλωπες), resembling flea-bites or gnat-bites, which appear at the commencement of fevers arising from a vitiated state of the humours, and sometimes occur in the causos or remittent fever. "In highly malignant and pestilential fevers," he says, "the exanthemata are ulcerated, and some of them resemble anthraxes or carbuncles; but they all denote the redundancy of a corrupt and corrosive humour. Those which appear on the face are the most troublesome of all: a great number is worse than a smaller; the larger ones<sup>4</sup> are worse than those more contracted; those which

<sup>1</sup> Quoted by Aëtius, ii. l. 95. p. 223. ed. Lat., p. 92 B. ed. Gr.

<sup>2</sup> "He means that the diseases composing an epidemic *Loimos* display a greater degree of malignity than is exhibited by them separately out of a pestilential constitution." (Willan's Note, p. 27.)

<sup>3</sup> Quoted by Aëtius, ii. l. 129. p. 234. ed. Lat., p. 96 B. ed. Gr.

<sup>4</sup> "Compare Rhazes (Channing's edit.) *De Variolis et Morbillis*, cap. xiv. p. 193." (Willan's Note, p. 28.)

suddenly disappear are worse than those which continue for a longer time;<sup>1</sup> and those which are inflamed are much worse than those which only produce itching. Those which arise in a state of costiveness, or when the alvine discharges are moderate, prove favorable; but those which take place with a diarrhoea or violent vomiting are bad; if those which supervene in the last case stay the flux, they are favorable.<sup>2</sup> These exanthemata are attended with fevers of an untractable kind, and with great faintness." At the beginning of the pestilential and anthrax-like eruption he recommends blood-letting, but afterwards allows the patient a generous diet, in order to support his strength through the fever. He thinks the cerates and ointments employed for burns may be occasionally useful as external applications.<sup>3</sup> "The eruptions on the face," he says, "may be soothed by washing with warm water;" he recommends that on the rest of the body they should be sponged with diligence, especially when they are of the itching kind. "Should the ulcerations extend in the herpetic form,"<sup>4</sup> he says, "a small portion of quicklime may be added, for it has a wonderful effect in drying, and in obviating their disposition to noma<sup>5</sup> (τὸ νομῶδες αἰτῶν). After the *height* or *maturation* of the complaint (παρακμῆς γενομένης) he advises to evacuate the morbid matter by a suitable

<sup>1</sup> "Et quando Variolae et Morbilli de improvviso intus subsidunt, postquam coeperint emergere, et cum molestia simul accidit deliquium, interitus cito sequetur, nisi erumpant denuo. Rhazes, pp. 195, 197." (Willan's Note, p. 29.)

<sup>2</sup> "Similar observations will be found in all the writers on Small-Pox, from Rhazes to Sydenham." (Willan's Note, p. 29.)

<sup>3</sup> "Compare Rhazes, *Opera Parva*, p. 202. ed. Lugd. 1511." (Willan's Note, p. 30.)

<sup>4</sup> "Ἐρπυστικά. This appearance is noticed in the Small-Pox by Rhazes:—'Variolae quae ambulant ut formica [herpes] et quae faciunt superficiem corporis sicut spasmata, malae sunt et mortales.' (*Divis.* c. 159. in *Opera Parva*, pp. 66, 7. Gerardo Carmonensi interprete.) Rhazes has described in another place (*De Var.* c. 14.) white, confluent Variolae, forming large circles or rings, with an appearance of fat or steatomatous matter under the skin. Channing's edit. p. 193." (Willan's Note, p. 30.)

<sup>5</sup> "Rhazes (cap. ix.) and Avicenna (p. 73. vol. ii.) have noted the tendency to ulceration, at the decline of the Small-Pox. Dr. Alexander Russell observes on the Small-Pox at Aleppo, 'If the sick survived the eleventh day, few of them escaped corrosive ulcers with carious bones, or hard swellings in the glandular parts.' Oct. 1742. [*Nat. Hist. of Aleppo*, vol. ii. p. 316.] This is not peculiar to hot climates, since it was frequently observed by Dr. Huxham in this country. 'Variolae epidemicae interdum crudo diffuunt ichore, qui subjectam carnem erodit, imo et nonnunquam ipsa gangraena afficit.' Julio, 1744.—Compare Pechlini *Obs.* p. 237, and Amat. Lusitan. *Cent.* III. cur. xvii. p. 234." (Willan's Note, p. 30.)

The meaning of the word νομή is explained below, Note HH.

purgative, &c. An “anthrax-like” fever and eruption is mentioned also by Galen<sup>1</sup> and Palladius,<sup>2</sup> and the passages in question are quoted by M. Littré. (p. 58.)

It seemed due to Willan’s well-deserved reputation to quote at full length the Notes in which he draws attention to the points of resemblance between this “anthrax-like” fever and the Small-Pox. His conclusion is as follows:—“Since Herodotus and Rufus, in their accounts of the *Loimos* or *Febris Loimodes*, have omitted the characteristic appearances of buboes and carbuncles, only observing that the eruptions diffused over the face and the whole body were somewhat of the nature of carbuncles or partly resembled them, we may conclude that the disease they describe was not the Pestilence [or true Plague], but an epidemical, contagious, destructive, and all-dreadful eruptive Fever, of which history affords no parallel but in the Small-Pox.” (pp. 33, 34.)

It is useless to attempt to deny the resemblance that Willan has pointed out, and at the time at which he wrote (probably about 1810) he was perhaps justified in the conclusion at which he arrived. Ten years, however, after the publication of his “Miscellaneous Works,” a Greek fragment appeared, which is of the greatest importance in determining the question as to the antiquity of the true Plague, and which, at the same time, positively contradicts one of Willan’s statements above, and therefore weakens in a great degree the validity of his inference. It is now tolerably certain that Rufus Ephesius was acquainted with “pestilential buboes” (οἱ λοιμώδεις καλούμενοι βουβῶνες),<sup>3</sup> and he may therefore have been describing the true Plague in the passage quoted above from Aëtius. And with respect to the passage from Herodotus, however easily and naturally the “anthrax-like eruption” of which he speaks might be supposed to describe a severe case of confluent Small-Pox, if it were but uncontestedly proved that this disease was known to the Greek physicians of the first century after Christ; yet, as this is a point on which the most learned medical antiquaries are far from being agreed, this

<sup>1</sup> *De Prob. et Prav. Aliment. Succis*, c. 1. vol. vi. p. 750.

<sup>2</sup> *Comment. in Hippocr. “Epid.”* in Dietz’s *Scholia in Hippocr. et Gal.* vol. ii. p. 33.

<sup>3</sup> See Cardinal Mai’s Collection of “*Classici Auctores e Vaticanis Codicibus editi*,” (Rom. 1831.) vol. iv. p. 11. Whoever has not an opportunity of consulting this work may refer to M. Littré’s *Hippocrates*, vol. ii. p. 585: iii. 4: v. 60. The genuineness of the passage in question appears to be doubted by some persons (see *Medico-Chirurgical Review* for Oct. 1846. p. 290.), but probably without sufficient reason.



single passage cannot fairly be considered to settle the question : and therefore the conclusion to which the Writer is led by his inquiries in this Note, is :—1, that the word *ἄνθραξ* never signified the Small-Pox in ancient Greek writers ; and 2, that, though the “anthrax-like” (*ἀνθρακώδης*) fever and eruption mentioned by a few authors may *possibly* have referred to that disease, yet this is a point which cannot be *proved*.

(NOTE H. p. 27.)

That is, his Commentary on the “Timaeus” of Plato, which was translated into Arabic by Honain Ibn Ishak.<sup>1</sup> Of this work only a few fragments remain, which are to be found in a Latin version in the fifth volume of Chartier’s edition of Hippocrates and Galen ; but, as the passage here quoted by Rhazes is not among these, we do not know even the Latin translation of the Greek word supposed to signify the Small-Pox. The same opinion is, however, expressed in several parts of Galen’s extant works, and from them, therefore, we may derive some assistance. Perhaps the passages which bear most resemblance to that in the text are the two following :<sup>2</sup>—*φλεγμονὰς δ’ οἱ μὲν παλαιοὶ τὰς οἷον φλογώσεις ὠνόμαζον· οἱ δὲ νεώτεροι οὐ πάσας· οὔτε γὰρ τὸν ἔρπητα, οὔτε τὸ ἐρυσίπελας, οὔτ’ ἄλλο οὐδὲν τῶν τοιούτων ταῖς φλεγμοναῖς συναριθμοῦσιν.* And, *καὶ γὰρ πάντα τὰ φλογώδη καὶ θερμὰ δηλοῦνται τῶν νοσημάτων,* (i. e. in the writings of Hippocrates,) *ἐρυσιπέλατα, ἔρπητες, ἄνθρακες.* In both these passages the terms *ἐρπητης* and *ἐρυσίπελας* occur, which therefore tends somewhat to confirm the Translator’s conjecture, that these are the two words which are signified by *جدري* *Jadari* and *حمرّة* *Humrah*.

<sup>1</sup> See Wenrich, *De Auct. Graec. Vers.* &c. p. 258.

<sup>2</sup> *Ad Glauco. de Meth. Med.* i. 16. tom. xi. p. 69 ; and *Comment. in Hippocr.* “*De Rat. Vict. in Morb. Acut.*” iv. 19. tom. xv. p. 769. See also *De Diffic. Respir.* iii. 5. tom. vii. p. 911 ; *De Meth. Med.* xiii. 1. tom. x. p. 875 ; *Comment. in Hippocr.* “*Epid.* vi.” iii. 29. tom. xvii. pt. ii. p. 121 ; *Comment. in Hippocr.* “*De Fract.*” iii. 8. tom. xviii. pt. ii. p. 548.



## (NOTE I. p. 29.)

Galen's Commentary on the "Aphorisms" of Hippocrates was translated into Syriac by Honain Ibn Ishak, and thence into Arabic by Kostá Ibn Lúká, who lived in the ninth and tenth centuries after Christ.<sup>1</sup> The passage here quoted by Rhazes is probably the following:<sup>2</sup>—οἱ ἀκμᾶζοντες ἐνίοις μὲν τῶν ἰατρῶν, ἐνίοις δὲ οἱ παῖδες ἔδοξαν εἶναι θερμότεροι· ἔχουσι γὰρ οἱ μὲν δριμύτερον τὸ θερμὸν, οἱ δὲ πλέον. The same idea is expressed at greater length in his little work *Adversus Lycum*,<sup>3</sup> and there is a note on the expression ἔμφυτον θερμόν in the fourth volume of M. Littré's Hippocrates, p. 427.

## (NOTE J. p. 39.)

The word ورشكين *Werashkin* is rendered *boils* by Stack, and *furunculorum* by Channing, and may perhaps (for it is not certain,) answer to φνυμάτων in the Greek Translation. It occurs again below, § 12. p. 74. (ed. Channing,) and *Cont.* §§ 11, 26, and perhaps 81; but the Translator has as yet met with it in no other medical writer. The meaning of the word is not much explained by the following passage from Ibn Abí Oṣaibí'ah, (quoted by Channing,) in the Appendix to Freind's *History of Physic* (p. 11.):—"Interrogatus Gabriel ab Abu Isaac de morbo qui *Wersekin* appellatur, respondit, 'Nomen hoc Persae composuerunt e duabus vocibus, *fractionis* videlicet et *pectoris*; nam in puriori sermone Persarum nomen pectoris est *wer*, quod vulgo *ber* dicitur; nomen autem fractionis *eskin* [*eshkin*]: si ambae voces una conjungantur, efficiunt *wersekin* [potius *wereshkin*], i. e. morbus ille in quo pectus necessario frangitur; qui quidem si in aliquo firmetur, ex illo non assurget, et is qui ex illo evadit, ne recrudescat morbus annuo spatio verendum est, nisi tempore morbi vel postea vomitus sanguinis, quem expellit natura per nares aut inferne, copiose accadat, tunc salus speranda est.'" This passage would seem to indicate some much more formidable disease than a mere *boil*.

<sup>1</sup> See Wenrich, *De Auct. Graec. Vers.* &c. p. 249; Wüstenfeld, *Gesch. der Arab. Aerzte*, &c. p. 49.

<sup>2</sup> i. 14. tom. xvii. pt. 2. p. 404.

<sup>3</sup> tom. xviii. pt. i. p. 196, &c.

(NOTE K. p. 45.)

The Arabic names here are الباسليق *Al-básillik*, and القيغال *Al-kíful*, which are evidently the Greek words βασιλική and κεφαλική. These names were quite unknown to Galen, and appear to be of comparatively modern origin, the only Greek writers in whom the Translator has been able to find them being Synesius<sup>1</sup> and Leo:<sup>2</sup> it is somewhat singular that neither of them is used by the Greek Translator, though they must of course have been known to him. The Arabic words are found also in Avicenna,<sup>3</sup> Albucasis,<sup>4</sup> and Haly Abbas.<sup>5</sup>

(NOTE L. p. 45.)

There is some difficulty in the Arabic text here,<sup>6</sup> which requires to be examined, and which will be much illustrated by the following extracts from Albucasis. In his chapter on Venesection<sup>7</sup> he enumerates the different veins and arteries from which blood is sometimes extracted, and says that five of these are in the arm and hand. "One of them is the cephalic vein (القيغال *Al-kíful*), which is on the outer side, and is commonly called the 'vein of the head.' Another is the dark (?) vein (الاکحل *Al-achal*), which is in the middle, (i. e. the *median* vein,) and is composed of a branch of the basilic and a branch of the cephalic: this is commonly called the 'vein of the body.' The third is the basilic, (الباسليق *Al-básillik*), which is situated on the inner side, and is also called the 'axillary,' but more commonly the 'vein of the abdomen.'" (p. 460.)

"The use of opening the basilic vein is to take blood from the parts near the thorax and abdomen in those diseases whose seat is lower than the throat and neck." (p. 472.)

<sup>1</sup> *De Febris*, p. 278. ed. Bernard.

<sup>2</sup> *Conspect. Medic.* ii. 1., in Ermerins, *Anecd. Med. Graeca*, p. 109.

<sup>3</sup> tom. i. p. 32. l. 16: 31. 44: 32. 7.

<sup>4</sup> *De Chirurg.* pp. 460, 472, 494.

<sup>5</sup> *Pract.* ix. 3. in MS. Arab.

<sup>6</sup> In the English text, for *inner*, read *median*.

<sup>7</sup> ii. 95. p. 460 sq. ed. Arab.

“The use of opening the median vein is to take blood from the upper part of the head and the lower part of the body, because this vein (as we have said,) is composed of a branch of the basilic and a branch of the cephalic.” (p. 474.)

“The use of opening the cephalic vein is to take blood from the head.” (p. 474.)

In the Arabic MS. of Rhazes, at Leyden, some words are omitted in the text, which are written *lengthways* in the margin, and of which one half of each letter has been cut off when the volume was rebound, so as to render the whole clause almost illegible. Accordingly these words are omitted and unnoticed by Stack; and Channing (who never had an opportunity of examining the Leyden MS. himself,) has stated the fact, and endeavoured to supply the omission by the help of the Greek Translation, which is as follows:—*ἄριστον δὲ ἐκχεῖν ἐκ τοῦ μέσου ἀγκῶνος, ἢ ἐκ τῶν παραφυάδων τούτου· εἰ δ' ἀφανὴς εἴη, ἐκ τῆς ἐντὸς φλεβός· εἰ δὲ καὶ αὕτη ἀφανὴς, ἐκ τῆς κρανιακῆς*. Here we have the distinct mention of three veins, in the words *ἐκ τοῦ μέσου ἀγκῶνος*,<sup>1</sup> *ἐκ τῆς ἐντὸς φλεβός*, and *ἐκ τῆς κρανιακῆς*, answering respectively to the *median*, *basilic*, and *cephalic*; but the Greek Translator differs from the Arabic text in recommending the *median* vein to be opened in preference to either of the others,<sup>2</sup> instead of the *basilic*. Channing translates the whole passage thus:—“Porro optimum erit, si ex vena basilica, vel quodam ejus ramo detraxeris; quodsi haec occultetur, ex interiore vena; quodsi haec etiam non appareat, ex cephalica.” This is clearly wrong, as Channing *means* to speak of *three* veins, but does in fact mention only *two*, the “vena basilica” being the same as the “interior vena,” as we know perfectly well, and as is plainly stated in the first sentence quoted from Albucasis. By help of the context, however, the mutilated words in the margin of the Arabic MS. *can* be made out with tolerable certainty, and it appears most probable that the last word is *الاکحل* *Al-achal*, the term used by Albucasis, Avicenna,<sup>3</sup> and Haly Abbas,<sup>4</sup> to signify the median vein, which agrees with the Greek translation, and is required by the sense. In this, however, as in many other passages, the Venice MS. would probably afford much assistance.

<sup>1</sup> In the sentence immediately following the quotation in the text, this vein is called still more plainly, *ἡ μέση*.

<sup>2</sup> The quotations from Albucasis tend to support the Arabic text on this point, rather than the Greek translation.

<sup>3</sup> vol. i. p. 32. l. 10, 16, 17: 289. 32: 588. 6.

<sup>4</sup> *Pract.* ix. 3, in MS. Arab.

(NOTE M. p. 45.)

The Arabic name is **الصابن** *As-sáfin*, which is the word used by Avicenna,<sup>1</sup> Haly Abbas,<sup>2</sup> and Albucasis,<sup>3</sup> and is of course the same as *Saphena*. It is commonly said to be a Greek word, or of Greek origin; but (as far as the Writer is aware,) it is not to be found in any Greek author, and the derivation from *σαφής*, or *σαφηνής*, is (to say the least,) extremely doubtful.

(NOTE N. p. 50.)

Channing here quotes from Casiri<sup>4</sup> a passage on the weights in use among the Orientals, taken from an anonymous Arabic MS. in the Escorial Library; but, as this extract is by no means sufficient to exhaust the subject, (which is somewhat complicated and difficult,) and as to discuss it completely would require greater details than most of the readers of this book would care to find here, it has been thought better merely to state that the Translator has used in the text the same terms as Stack and Channing; which, though perhaps none of them *exactly* correspond with the weights designated by the same names among ourselves, are yet sufficiently accurate and definite for our purpose.

(NOTE O. p. 52.)

The Arabic word **كحل** *cuhl* has been retained in the text because (spelled as it is sometimes, *Kohol*, *Kohhl*, *Kohl*, &c.) it is doubtless familiar to many English readers. Ibn Baitár says<sup>5</sup> the word signifies a black eye-salve in general, composed for the most part of **اثمد** *Ithmid*, or antimony. Dr. Russell's account of this substance, and the mode of using it at Aleppo, is as follows:—<sup>6</sup>

<sup>1</sup> vol. i. p. 32. l. 48: 106. 15.<sup>2</sup> *Pract.* ix. 3, in MS. Arab.<sup>3</sup> *De Chirurg.* pp. 460, 486.<sup>4</sup> *Biblioth. Arabico-Hisp. Escur.* tom. i. p. 281.<sup>5</sup> vol. ii. p. 351.<sup>6</sup> *Nat. Hist. of Aleppo*, vol. i. pp. 111, 366.



“Another universal custom among the women, is blacking the inside of the eyelids, by means of a short smooth probe of ivory, wood, or silver, charged with a powder named the *black Kohol*. The probe being first dipt in water, a little of the powder is sprinkled on it; the middle part is then applied horizontally to the eye, and the eyelids being shut upon it, the probe is drawn through between them, leaving the inside tinged, and a black rim all round the edge.

“*Kohol* كحل is a general term for a medicine applied to the eyeball, or the inside of the eyelids, in the form of a powder finely levigated. That which is employed for ornament, is called simply *Al-kohol* [الكحل] or *Isphahany* [اصفهانى]; when other ingredients (as flowers of olibanum, amber, or the like,) are added, on account of particular disorders, the kohol is distinguished by some appropriate epithet.

“The substance used at Aleppo for the ordinary kohol, is a kind of lead ore brought from Persia, and is prepared by roasting it in a quince, an apple, or a truffle; then adding a few drops of oil of almonds, it is ground to a subtile powder, on a marble. But of late years the lead ore brought from England, under the name of *Arcifoglio*, has been used instead of the Isphahany.

“The quantity of kohol consumed in the East is incredibly great. It has been said by one of their poets, in allusion to the probe used for applying the powder, and the mountains where the mineral is found, ‘That the mountains of Isphahan have been worn away by a bodkin.’

“The probe or bodkin for the kohol is called [ميل] *meel*, and is of different sizes, from that of an ordinary quill downwards. It is straight, but tapers a little, and is blunt at the point. If I am not mistaken, I have seen some of ivory, found at Herculaneum, which very nearly resembled those now used in Syria.

“The mineral used for the kohol is, by the Arabs, called *Ithmed* ائثم, or *Isphahany* اصفهانى, and is no doubt the *stibium* of the Greeks: but it may be doubted whether by Σρίμμι was always understood what is now called *antimony*.

“Pure or crude antimony is not at present used at Aleppo for the kohol, and probably never was. The substance most in request was formerly the Isphahany اصفهانى, evidently a lead, not an antimonial ore: and it has already been remarked that large quantities of common English lead ore have been imported to Aleppo, as a substitute;



Isphahany having become scarce and dear. I have examined many specimens of the antimonial and lead ores in the English collections, but never saw anything resembling the antimonial ore in Syria.

“The English antimony, in its native state, on account of particles of lead ore being sometimes mixed with it, is thought to be less fit for medicinal use. But this, with respect to the kohol, would be no objection; for both Dioscorides and Pliny assert that stibium exposed in the preparation, to too strong a heat, turns into lead.<sup>1</sup> In the substance used at present for the kohol there is no mixture of antimony.

“The use of the kohol is of very ancient date. Passages relative to it, in Sacred History, may be seen in Shaw,<sup>2</sup> Harmer,<sup>3</sup> and Bishop Lowth’s notes on Isaiah, iii. 16.

“The following passage from Naumachius<sup>4</sup> records the early practice among the Greek ladies :—

. . . . . [ἀλλὰ σὺ κόσμον  
παρθένη τηῦσίην μὴ δέεο μὴδὲ κατόπτρου,  
χειρὶ διακρίνουσα τεῖν. αὐγάζεο μορφήν,  
μὴδὲ κόμης περίαλλα πολυσχιδεᾶς πλέκε σειράς,  
μὴδὲ μέλαινε τεοῖσιν ὑπὸ βλεφάροισιν ὀπωπάς.]

‘Delight not, O virgin! in empty ornament,  
‘Nor view your form too studiously in the mirror,  
‘Scrupulously adjusting the many-cleft braids of your hair;  
‘Nor blacken your eyes, under your eyelids.’

Shaw observes that among other curiosities taken out of the catacombs at Sahara, relating to the Egyptian women, he saw a joint of the common reed, or donax, which contained one of the bodkins, and an ounce or more of the powder of the kohol, agreeably to the fashion and practices of those times. On the passage in Xenophon, referred to by Shaw, it may be remarked that blackening the eyes, though a custom among the Medes, was not at that time in use among the Persians; for Cyrus, among other things, seems to have been surprised at the painted eyes of his grandfather Astyages. (*Cyrop.* i.)

“Galen mentions blackening the eyelids as a daily practice among the women.”<sup>5</sup>

A similar account is given in Lane’s *Modern Egyptians*, vol. i. See also Dr. Adam Clarke’s Note on 2 Kings, ix. 30; Parkhurst’s *Hebrew Lexicon*, s.v. פָּךְ; Rupert’s Note on Juvenal, *Sat.* ii, 93, &c., and the authorities there referred to.

<sup>1</sup> Matthiolus, *Comment. in Dioscorid.* p. 596.

<sup>2</sup> *Travels*, p. 229.

<sup>3</sup> *Observations*, vol. ii. p. 405.

<sup>4</sup> [In Joan. Stobaei *Florileg.* tit. 74. § 7.]

<sup>5</sup> *De Sanit. Tu.* vi. 12. vol. vi. p. 439.

(NOTE P. p. 57.)

Both the orthography and the derivation of the term ملح اندراني *milh Andarání* are doubtful. The Greek Translator renders it by ἄλας γάγγραινον, which latter word (spelled also γάγγρινόν or γάγγρηνόν,) is explained in a MS. Lexicon, quoted by Du Cange,<sup>1</sup> to mean ἄλας ὀρυκτόν, or *fossil salt*. By Stack and Channing it is translated as in the text, and is derived from Andar, a village said by Maundrell to be a mile distant from Aleppo, where a very white fossil salt is found. Ibn Baitár uses the word, (which is translated by Sontheimer *Andranische*,) but without explaining its meaning (vol. ii. p. 530.) In the “Buhr-ool Juwāhir”<sup>2</sup> the word is derived from Andarān, a town of Arabia Felix; and is also said to be sometimes spelled دراني *Darání*, and ذراني *Dharání*. The former word occurs in Avicenna,<sup>3</sup> and is translated *Daranensis* by Plempius, who derives it (p. 202.) from a mountain named *Darān*. See also Castelli *Lex. Heptagl.* p. 784.

(NOTE Q. p. 58.)

The Arabic words are طين خوزي *Tīn Chūzí*, which are omitted both by the Greek Translator and by Stack. Channing renders them *Bolus Susiana*, and refers to Meninski *Lex. Arabico-Persico-Turc.* col. 1970; but no explanation of the term is to be found there, nor has the Translator any to offer, as he has not as yet been able to meet with the name in any other Arabic medical writer.

(NOTE R. p. 60.)

There is some doubt about the reading here. زبد البحر *Zabadu-l-bahr* is said by Ibn Baitár (vol. i. p. 518.) to answer to the Greek

<sup>1</sup> *Glossar. Med. et Infim. Graecit.*<sup>2</sup> “The Buhr-ool Juwāhir: a[n Arabic] Medical Dictionary, by Mohammad Bin Yōsoof, the Physician of Herat. Edited by Hukeem Abd-ool Mujeed, under the patronage of the Committee of Public Instruction.” Calcutta, 1830. small fol.<sup>3</sup> vol. i. p. 212. ll. 16, 17, 22, 30, 31, 33, 34, 37: 343. 24, 26. ed. Arab.

'Αλκύνιον, and زبد البحيرة *Zabadu-l-bahírah* to the Greek 'Αδάρκης (p. 519.). The Greek translator has 'Αδάρκης, either (apparently,) confounding the two names, or else having in his Arabic MS. the words زبد البحيرة *Zabadu-l-bahírah*.

(NOTE S. p. 60.)

مسحقونيا *Mashukúntá* is omitted by the Greek Translator, rendered *scoriae of glass* by Stack, and left untranslated by Channing. The word is used not only by the Arabic writers, but also by some of the old Latin medical authors, by whom it is called *Massacumia*, or *Aqua Vitri*. The exact meaning of the term is not very certain, but probably the translation in the text is sufficiently accurate. See Ibn Baitár, vol. ii. p. 516; *The Buhr-ool Juwāhir*; Joubert's Note on Guido Cauliacus, *Chirurg. Magna*, vi. 2. 2. § 2. p. 308. l. 6, and p. 572.<sup>1</sup> (ed. Lugd. 1585. 4to.)

(NOTE T. p. 60.)

The Arabic word in the Leyden MS. is حجارى *hajárí*, which appears to be corrupt. Channing reads in the text حجازى *Hejzáí* (حجازى *Hejází*?) i. e. belonging to Hejáz, or Arabia Petraea, which agrees with Stack's translation, *Arabian*. As, however, Arabian sugar is not mentioned either by Avicenna or Ibn Baitár, Channing proposes to read حجارى *hajárí*, (a word not to be found in the Lexicons,) by which he probably meant *lump sugar*. The Greek Translator has σάκχαρ κεκαυμένον, whence it would appear as if he had read in his Arabic MS. محرق *muharrak*, which does not much differ in appearance from any of the above words. This point, however, is one of those which cannot be satisfactorily decided till the Venice MS. has been collated.

<sup>1</sup> This and the following page are wrongly numbered 672, 673.

## (NOTE U. p. 61.)

In illustration of this mode of treatment, Channing quotes the following passage from Guido Cauliacus:<sup>1</sup>—"Particulare regimen, in ea (*macula sc, sive albugine,*) quae recens est et tenuis, completur *lambendo et abstergendo lingua*, ut faciunt mulieres, etc."

## (NOTE V. p. 73.)

All the ancient medical writers do not follow the same system of "critical days;" that which Rhazes adopts is the following. "The third is critical in very acute fevers; the fourth is indicative of the seventh and sixth; the fifth is favorable; the sixth generally unfavorable; the seventh is a particularly favorable or unfavorable crisis; the eighth rarely critical, but if it be, unfavorable; the eleventh critical and indicative of the fourteenth; the twelfth rarely critical, and like the eighth; the thirteenth rarely critical; the fourteenth critical and favorable; the fifteenth like the thirteenth; the sixteenth like the twelfth; the seventeenth like the ninth, and indicative of the twentieth; the eighteenth rarely critical, or unfavorable; the nineteenth rarely critical, or if so, not bad; the twentieth next to the fourteenth, and favorable; the twenty-first sometimes critical, but less frequently so than the twentieth; the twenty-fourth resembling the twentieth; after these the twenty-seventh, thirty-first, thirty-seventh, and fortieth are critical. Averrhoës remarks, that great deference is due to Rhazes' opinion upon this subject, since it was confirmed by experience, in more than ten thousand cases, in an infirmary (*in infirmaria Relenson*). His list is very little different from that of Galen. In his *Continens*, he gives an account of the system of Archigenes, but prefers that of Hippocrates. (xxxii.)" (Dr. Adams, Note to Paulus Aegineta, vol. i. p. 197.)

## (NOTE W. p. 82.)

On this point Ibn Khallikán speaks as follows:<sup>2</sup>—"His abridged treatise on Medicine, the *كتاب المنصوري* *Citábu-l-Mansúrí*, is a

<sup>1</sup> *Chirurg. Magna*, vi. 2. 2. § 2. p. 307.

<sup>2</sup> *Biograph. Dict.* vol. iii. p. 319.

work of great repute, and, though of small extent, is highly appreciated; in this treatise he combines theory with practice, and furnishes essential information for persons of all classes. He composed it for Abú Sálîh Mansúr Ibn Núh Ibn Nasr Ibn Isma'íl Ibn Ahmad Ibn Asad Ibn Sámán, one of the Samanide kings, and for this reason he entitled his book المنصوري *Al-Mansúrí*, 'the Mansurian;' . . . . . he was a boy when Ar-Rází drew up the Mansúrí for his instruction.—

"Since writing the above, I have seen a copy of this work bearing on the title-page an inscription stating that it was composed for and named after Abú Sálîh Al-Mansúr Ibn Ishák Ibn Ahmad Ibn Núh, prince of Kirmán and Khorásán, and a descendant of Bahrám Kúsh. God knows best which of these statements is true."

(NOTE X. p. 89.)

Of the old Latin Translations of the Arabic physicians generally, and of Rhazes in particular, Casiri speaks in the following strong terms of condemnation, which, however, (as far as the Translator has had an opportunity of judging,) are not more unfavorable than the occasion warrants:<sup>1</sup>—"Ceterum Latinae, quae vulgo circumferunter, Rasis operum interpretationes, adeo barbarae ac insulsae sunt, ut nec Rasis dictionem, nec stylum sapiant, nec sententiam quidem exprimere aliquando videantur. Illas enim ego, quoties cum Arabicis archetypis conferre libuit, non ex Rasi, sed ex alio prorsus auctore factas omnino censui. Idem de antiquis Latinis translationibus ex Arabum philosophorum ac medicorum scriptis confectis eodem jure pronuntiandum: quas *Perversiones* potius quam *Versiones* merito dixeris."

(NOTE Y. p. 99.)

The character given of this work by Haly Abbas (who lived shortly after the time of Rhazes) is as follows:<sup>2</sup>—"At vero Maheramodus filius Zachariae Razii (*Mohammed Ibn Zacaríyá Ar-Rází*) librum quendam condidit (sc. *Lib. ad Almans.*) in quo collectim et conjunctim omnia quae artis sunt medicae inducit, nihil omittens, sed permolesta utens brevitate nihil explanat ut expedit; cum ejus hoc fuerit propo-

<sup>1</sup> *Biblioth. Arabico-Hisp. Escur.* vol. i. p. 266.

<sup>2</sup> *Theor.* i. l. p. 6.



situm et intentio. Edidit et librum qui *Continens* dicitur, in quo invenio illum dixisse omnia quae medicis necessaria sunt de custodia sanitatis et medela passionum ac morborum quae est cum ciborum et medicaminum regimine, magnus operatione tum causas et signa expediens, nihilque praetergreditur eorum quae ad hujus artis aemulationem requiri, nisi quod rerum naturalium nullam facit notitiam, ut scientiam elementorum, complexionum, humorum, expulsiōnemque membrorum, virtutum, actionum, spirituum; nec vero ea quae dixit competenti prosecutus est ordine, nec modo doctrinae, nec in sermones opus divisit et portas ac capitula, ut non similis sit cognitio ejus, et scientia artis medicae ejusque dispositioni. Nec vero excellentiam ejus refuto; scientiam in arte repello medicae dispositionisque qualitatem librorum. Quae autem suggeruntur mihi de hujus viri cognitione quam imaginor de ejus intentione et proposito hoc in libro duo sunt: aut enim sibi hunc composuit librum tanquam commonitorium totius medicinae artis, ut esset proprium ejus et rediret ad illum cum necesse ei aliquid esset aut de custodia sanitatis aut morborum medela senectutis tempore et defectus ac oblivionis; aut quoniam incommodum aliquod libris suis accidere posse speraret, sufficeretque ei liber hic. Ideoque bonitati dispositionis et pulchritudini supersedit ordinis libri; aut ut hominibus hic offerret, essetque ei quasi commemoratio deinceps disposituro et ordinaturo unamquamque suo speciem loco, demonstraturoque singula prout res expeteret, fieretque eo liber non completus et integer, sed impeditus quovis est incommodo aut morte antequam compleretur occupatus; et siquidem hoc ejus fuit propositum hoc in libro, nimium verba protulit et ampliavit absque urgenti ad hic necessitate in tantum ut prudentium quidam ab ejus transcriptione defecerint, nisi perpauci; ideoque raro invenitur. Retulit enim in unaquaque morborum et causarum et signorum et curarum specie quod quisque medicorum dixerit et antiquus et modernus, ab Ypocrate (*Hippocrate*) et Galieno (*Galeno*) usque Ysaach Joannis filii, (*Ishak Ibn Honain*), qui interfuerunt medicos modernos et antecedentes commemorans, nec aliquid quod quisquam eorum dixerit praetermittit quin hic inducat libro."

(NOTE Z. p. 101.)

"Al-Yehúdí" اليهودي or *the Jew*, that is Máserjawaih ماسرجويه a celebrated Jewish physician, who was a native of

<sup>1</sup> It appears from the Arabic MS. text of this passage that the word "*expulsiō*," which the Translator has never before met with, means *dissection*.

Syria, and lived at Basrah in the reign of the Chalíf Merwán I., A.H. 64. (A.D. 683 $\frac{3}{4}$ .) He translated the "Pandects" of Ahrún from Syriac into Arabic, and is several times quoted by Rhazes, and also by Ibn Baitár; but (as far as the Writer is aware,) none of his writings are extant. The following anecdote is told of him by Abú-l-Faraj<sup>1</sup> and Ibn Abí Osaibi'ah:<sup>2</sup>—A man came to him one day, and said, "I am troubled with a disease such as no one else has ever suffered." Upon being asked the nature of his illness, he replied, "When I get up in the morning my sight is dim, and I feel as if a dog were gnawing my stomach; this state continues till I eat something, after which it ceases until noonday; then this same feeling returns, and after eating something it ceases until the time of evening prayers; it then returns again, and I can find no remedy for it except eating." Then said Máserjawaih, "Truly this disease of thine must be hateful unto God, seeing that He hath chosen so base a man upon whom to bestow it! oh that this disease might be transferred to me and to my children, and I would give thee in return for it the half of all I possess!" The man replied, "I understand thee not." And Máserjawaih said to him, "This is *health*, which thou dost not deserve to possess. Would to God that it might be taken away from thee and given to one who is more worthy of it." (See Wüstenfeld, *Gesch. der Arab. Aerzte*, § 15. p. 9; Carmoly, *Hist. des Médecins Juifs*, Bruxelles, 1844, 8vo. § 14. p. 17.)

(NOTE AA. p. 103.)

Abú-l-Hasan 'Alí Ibn Sahl **أبو الحسن علي بن سهل** called also "Ibn Rabn<sup>3</sup> At-Tabarí," **ابن ربن الطبري** the son of a Jewish

<sup>1</sup> *Hist. Dynast.* p. 127.

<sup>2</sup> *Fontes Relationum de Classibus Medicorum*, viii. 17. (MS. Arab.)

<sup>3</sup> This name is written differently in different MSS. **زَيْن** *Zain*, **زبان** *Zaban*, **رزين** *Razain*, **ربن** *Raban*, &c. Wüstenfeld and Carmoly call him "Ibn Zein." There can, however, be no doubt respecting the orthography of the work, as the author of the dictionary called *Tárichu-l-Hucamá* places *Rabn* after *Rizk Allah*, and before the chapter of names beginning with Z. The words **ربن** *Rabn*, **ربين** *Rabin*, and **الرب** *Ar-Rabb*, are names given by the Jews to the chief doctors of their Law; and *Rabn* is therefore equivalent to *Rabbi*. (De Slane's Note to Ibn Khallikán's *Biograph. Dict.* vol. iii. p. 321.)

physician, was born and educated in Ṭabaristán. Having been forced by the troubled state of his native country to take refuge in Rai, where he had Rhazes for one of his pupils, he afterwards proceeded to 'Irák 'Arabí, and settled at Sarra-man-ráa, or Samara. He was at first secretary to Mázyár Ibn Cárún Ibn Zaid, the governor of Ṭabaristán, under the Chalíf Al-Motasem, who revolted A.H. 224. (A.D. 839.) He afterwards made his profession of Islamism to the same Chalíf, and then proceeded to the court of Bagdád, where he entered the service of the Chalíf Al-Motawacel, and became one of his boon companions, about A.H. 235. (A.D. 849.) He possessed considerable philological knowledge, and wrote several works, which are frequently quoted by Rhazes and also by Ibn Baitár, and of which the titles are preserved, but which (as far as the Writer is aware,) are not to be found in any of the European Libraries. One of his sayings is recorded by Ath-Tha'álebí,<sup>1</sup> viz. that "an ignorant Physician hastens death." (See De Slane's Note to his Translation of Ibn Khallikán's *Biograph. Diet.* vol. iii. p. 321; Wüstenfeld, *Gesch. der Arab. Aerzte*, § 55. p. 21; Carmoly, *Hist. des Médecins Juifs*, § 18, p. 22.)

(NOTE BB. p. 103.)

Ahrún **أهرون**, a Christian priest and physician of Alexandria, who lived in the reign of the Emperor Heraclius,<sup>2</sup> A.D. 610-641. He compiled a large medical work entitled **كناش** *Cunnásh*, or *Pandects*, a name frequently occurring among Syriac and Arabic medical works. It is not quite certain whether it was originally written in Greek or Syriac,<sup>3</sup> but it was translated into Arabic by Máserjawaih,<sup>4</sup> under the reign of the Chalíf Merwán I., A.H. 64. (A.D. 683.)<sup>5</sup> It consisted of

<sup>1</sup> See the Chrestomathy at the end of Roorda's Arabic Grammar, p. ۲۱, § ۹۷.

<sup>2</sup> Abú-l-Faraj, *Hist. Dynast.* p. 99.

<sup>3</sup> It is supposed by Freind (*Hist. of Physic*, vol. ii. p. 8.) Haller, (*Biblioth. Medic. Pract.* vol. i. p. 335.) Kühn, (*Additam. ad Indicem Medicor. Arab. a Fabric. in "Biblioth. Graeca" exhibit.*) Wüstenfeld, (*Gesch. der Arab. Aerzte*, § 9. p. 7.) and others, to have been written in Syriac; but perhaps it is more probable that Greek was the original language, both because this was the language at that time in use at Alexandria, and also because Abú-l-Faraj (or *Bar Hebraeus*,) in his *Chronicon Syriacum*, (p. 62.) says expressly that "he was not a Syrian himself, but that his book was translated from Greek into Syriac by an Alexandrian named Gosius."

<sup>4</sup> See above, Note Z.

<sup>5</sup> Abú-l-Faraj, *Hist. Dynast.* p. 127.

thirty books, to which two more were added by Sergius.<sup>1</sup> His work appears to have been lost; at least no manuscript of it (as far as the Writer is aware,) is to be found in any European Library: large extracts from it are, however, preserved by Rhazes in his "Continens." The following is the judgment passed on Ahrún's work by Haly Abbas:<sup>2</sup> — "Aaron volumen edidit, in quo et morborum medelas persequitur, passionibus earum curans et curas. Res autem naturales et non-naturales collecte et breviter commemorat, nihil de custodia sanitatis aut chirurgia tractans; simulque interpretatio ejus rudis et cruda quasdam perobscuras adducit sententias ad quarum propositum fert ostensionis, maximeque Johannis intuenti interpretationem aliorumque." Ahrún is chiefly celebrated as being the earliest writer who is universally acknowledged to have mentioned the Small-Pox and Measles. (See the art. *Ahrún*, in the *Biograph. Dict.* of the Useful Knowl. Soc., and the authorities there referred to.)

(NOTE CC. p. 106.)

Yúsuf As-Sáher *يوسف الساهر*, called also "Yúsuf Al-Kass" *يوسف القس*, (or *the Christian Priest*), attained considerable eminence as a physician in the reign of the Chalíf Al-Moctafí, A.H. 289-295. (A.D. 902-908.) the seventeenth of the 'Abbassides. He gained the surname of *الساهر* *As-Súher*, i. e. *Vigilator*, or *the Watcher*, either because he used to spend three quarters of the night in study, or because he had a cancer on his forehead which prevented his sleeping. He wrote some medical works which are quoted by Avicenna (*Can.* v. 2. 8. vol. ii. p. 333), and several times by Rhazes and Ibn Baitár, but are probably not now extant. (See Abú-l-Faraj, *Hist. Dynast.* p. 186.; Ibn Abí Osaibi'ah, *Fontes Relat. de Class. Medic.* viii. 34 (MS. Arab.); Wüstenfeld, *Gesch. der Arab. Aerzte*, p. 38. § 93.

<sup>1</sup> Abú-l-Faraj, *loco cit.* There is (as Wüstenfeld remarks,) some slight difficulty here, as Sergius is said to have lived in the reign of the Emperor Justinian, A.D. 527-565. (Abú-l-Faraj, p. 94.) If, however, we suppose Sergius to have been a young man towards the end of the reign of Justinian, and Ahrún an old man towards the beginning of the reign of Heraclius, they may easily have been contemporaries.

<sup>2</sup> *Theor.* i. 1. p. 6.



(NOTE DD. p. 107.)

Abú Zacaríyá Yohanná Ibn Másawaih, **ابو زكريا يوحنا بن ماسويه**, commonly called "Mesue the Elder,"<sup>1</sup> was, according to some authorities, a Syrian Christian, but according to others, a native of Jondísábúr, in Persia, where his father was an apothecary. He received his medical education from Jabríl Ibn Bachtishwa', by whom he was appointed Director of the Hospital at Bagdád. He was for fifty years physician to the Chalífs from Harún Ar-Rashíd, the fifth of the 'Abbassides, to Al-Motawacel, the tenth of the same dynasty; by the former of whom he was commissioned to collect and translate several Greek works. He died at Samara in 'Irák 'Arabí, A.H. 243 (A.D. 857). The titles of thirty of his works have been preserved,<sup>2</sup> several of which are still extant in MS. in several European Libraries. A short collection of aphorisms has been published in Latin,<sup>3</sup> and attributed to Joannes Damascenus, but these are of doubtful genuineness. Some anecdotes of him are related by his biographers, who say that he enjoyed a great reputation, and had numerous pupils to attend his lectures at Bagdád, among whom was Honain Ibn Ishák: he appears also to have been celebrated for his facetiousness and repartees, of which some specimens have been preserved. A priest<sup>4</sup> once came to him, and said, "I feel unwell in my stomach." "Use," said Yohanná, "the *Electuarium Susianum*."<sup>5</sup> "I have done so," replied the man. "Use the *Electuarium Diacyminum*,"<sup>6</sup> said Yohanná. The man replied "I have already

<sup>1</sup> It is important to distinguish him from the younger physician of the same name, who is the author of the pharmaceutical work that goes under the name of *Mesue*.

<sup>2</sup> Wüstenfeld, *Geschichte der Arab. Aerzte*, § 59. p. 23; Casiri, *Biblioth. Arabico-Hisp. Escur.* vol. i. p. 316.

<sup>3</sup> Together with the Aphorisms of Rabbi Moses, or Maimonides, Bonon. 1489. 4to.; and in different editions of the Collection called "Articella." See Choulant's *Handb. der Bücherkunde für die Aellere Medicin*. p. 337, § 83.

<sup>4</sup> Abú-l-Faraj, *Hist. Dynast.* p. 154.

<sup>5</sup> **النخوزي** *Al-chúzi*, from Chuzistán, the ancient Susiana. The composition of this electuary is given by Avicenna, v. 1. 3. vol. ii. p. 288. ed. Lat. (where it is called *Alcanzi*.) vol. ii. p. 201. ed. Arab. See also Sontheimer, *Zusammengesetzte Heilmittel der Araber*, &c. p. 81, who calls it *Alchawzy*.

<sup>6</sup> **الكموني** *Al-cumúni*. See Avicenna, *l. c.* pp. 286, 287. ed. Lat., p. 201. ed. Arab.; Sontheimer, pp. 76, 80.



taken some pounds of it." He then ordered him to take the *Pentadicon*,<sup>1</sup> to which the other replied, "I have already drunk a whole vessel full." "Use the *Confectio Ambrosia*,"<sup>2</sup> said Yohanná. "I have already done so, and in large quantities." At last Yohanná grew angry, and said to the man, "If you want to get well, embrace Islamism, for that is good for the stomach."

(NOTE EE. p. 109.)

It is not quite certain whether Serapion<sup>3</sup> is meant here, or his son Yayha Ibn Serapion, as the Arabic MS. omits the word *ابن* *Ibn*, while the Latin Translation calls him "Filius Serapionis," which perhaps is more likely to be the true reading. Of this Serapion nothing is known but that he belonged to a mercantile family, that he was himself a physician, and that he had two sons, Yohanná and Dáúd, who followed the same profession. He lived probably in the ninth century after Christ, or the third after the Hejrah.<sup>4</sup>

<sup>1</sup> البنداديقون *Al-bendákikún*, is no doubt the same word that is called by Avicenna, *l. c.* p. 201. ed. Arab. الفنداديقون *Al-fendádikún*; in the Latin Translation (p. 288.) *Alfendedicon*; and by Sontheimer (p. 81.) *Alfendadsigon*. It is evidently the Greek word *πενταδικόν*, but the Writer has not as yet been able to find a description of the medicine in any Greek author.

<sup>2</sup> الامروسيا *Al-Amrusiá*. See Avicenna, v. 1. 1. vol. ii. p. 187. ed. Arab., vol. ii. p. 275. ed. Lat., where it is called *Homorusia*; Sontheimer, p. 37, who calls it *Amrusia*.

<sup>3</sup> This Serapion must not of course be confounded with the Alexandrian physician of the same name, who belonged to the sect of the Empirici, and lived probably in the third century B. C.; nor again with the Arabic author of the work "De Simplicibus Medicamentis," who is commonly called "Serapion Junior," and probably lived in the eleventh century after Christ.

<sup>4</sup> See Ibn Abí Osaibi'ah, *Fontes Relationum de Classibus Medicorum*, cap. 6 *in fine*, quoted by Channing. This Serapion is not mentioned by Wüstenfeld, in his excellent *Gesch. der Arab. Aertzte*, &c.

(NOTE FF. p. 114.)

اسحق بن حنين هو ابو يعقوب اسحق بن حنين  
 Ishak Ibn Honain, or Abú Ya'kúb Ishak Ibn  
 Honain Ibn Ishak Al-'Ibádí,<sup>1</sup> was the son (as is here expressed,) of the  
 celebrated Christian physician Honain Ibn Ishak, commonly called  
 "Joannitius." He was physician to some of the 'Abbasside Chalífs,  
 and also to Casim Ibn 'Obaid Allah, wezír to Al-Motadhed. Like his  
 father, he employed himself in translating into Arabic some of the  
 principal Greek writers, e.g. Aristotle, Archimedes, Euclid, Autolycus,  
 and Ptolemy; he also wrote some unimportant medical treatises.  
 Some of his translations are still extant in MS. in several European  
 Libraries.<sup>2</sup> He died in the month of the second Rabi', A. H. 298  
 or 299. (Dec. A. D. 910 or 911). Ibn Khallikán says<sup>3</sup> that he was the  
 most eminent man of his time in the science of Medicine; and that, as  
 a translator, he attained the same superiority as his father, and equalled  
 him in the knowledge of different languages, and the faculty of ex-  
 pressing his thoughts in them with precision. An anecdote is told of  
 him by Ibn Khallikán, and another by Ath-Tha'álebí.<sup>4</sup>

(NOTE GG. p. 115.)

Channing thinks that Georgius is the same person as Bachtíshwa',  
 quoted below, § 71. This, however, is perhaps a mistake, as it is more  
 probable that Rhazes here refers to جورجيس بن ختيشوع

Jurjís Ibn Bachtíshwa', the first of a family of Christian physicians,  
 who attended on the Chalífs in succession for above two centuries, and  
 of whom some account may be found in Russell's *Natural History of*  
*Aleppo*,<sup>5</sup> and in Wüstenfeld's *Gesch. der Arab. Aertzte*, p. 14, § 26,  
 &c.

<sup>1</sup> "'Ibádí means, related to the 'Ibád of Hirá, who were a number of Christian families from different [Arabic] tribes which had settled there."—Ibn Khallikán, vol. i. p. 188. (Engl. Transl.)

<sup>2</sup> Wüstenfeld, *Gesch. der Arab. Aertzte*, &c. § 71. p. 29.

<sup>3</sup> *Biograph. Dict.* vol. i. p. 187. (Eng. Transl.)

<sup>4</sup> See Roorda's Arabic Grammar, p. ۲۱, § ۹۸.

<sup>5</sup> Appendix to vol. ii. pp. v, vi.

Georgius was director of the hospital and medical school at Jondísábúr,<sup>1</sup> in Persia, and enjoyed so great a reputation that when the Chalíf Al-Mansúr, the second of the dynasty of the 'Abbassides, was taken ill, he was sent for to attend him in his newly built city of Bagdád. He left his son Bachtíshwa<sup>2</sup> in charge of the hospital during his absence, and took with him one of his pupils. Upon his arrival at Bagdád the Chalíf received him very honorably, and was much pleased with his appearance and address: he also derived much benefit from his medical skill, and rewarded him with the present of three thousand dinars<sup>3</sup> (or about fifteen hundred pounds,) and three beautiful female slaves. These Georgius immediately returned, and said to Al-Mansúr, when he asked the reason of his conduct, that it was not lawful for Christians to have more than one wife, an answer which only raised him higher in the Chalíf's favour.<sup>4</sup> After some time, A.H. 152. (A.D. 769.) Georgius was seized with so severe a sickness that he begged permission to return home, to see his son and other relatives once more, and to be buried with his fathers; a permission which Al-Mansúr reluctantly granted, after having in vain endeavoured to induce him to embrace Islamism. To this application, and to the promise of Paradise by which it was enforced, Georgius replied, "Of a truth I am well content to be wheresoever my fathers are, whether in Paradise or in Hell." The Chalíf then gave him ten thousand dinars, (i. e. about five thousand pounds,) and ordered one of his servants to accompany him home to Jondísábúr, which he reached in safety. At the command of Al-Mansúr, Georgius translated several medical works into Arabic, but of these (as far as the Writer is aware,) nothing is still extant, except the fragments preserved by Rhazes and other Arabic medical authors.

(NOTE HH. p. 116.)

It is hardly possible to decide with certainty which passage in Galen's work is here referred to by Rhazes; but it is not unlikely to be the following:—ἐπειδὴ πρὸ ταύτης ἐγεγράφει [Ἀνδρόμαχος] δύο τιὰς ἐμπλάστρους, ὧν ἐπὶ μὲν τῆς προτέρας προὔγραψε, “Πρὸς

<sup>1</sup> See an essay, “De Gandisapora Persarum quondam Academia Medica,” by J. H. Schulze, in the *Comment. Acad. Scient. Petropol.* vol. xiii. p. 437.

<sup>2</sup> See Wüstenfeld, § 27. p. 15.

<sup>3</sup> See above, p. 138, Note (').

<sup>4</sup> Abú-l-Faraj, *Hist. Dynast.* p. 222.

γαγγραινας καὶ σηπεδόνας καὶ νομὰς παλαιὰς καὶ κακοθηεῖς," ἐπὶ δὲ τῆς δευτέρας κ.τ.λ. (ii. 2. tom. xiii. p. 473.) If this be the sentence quoted or alluded to by Rhazes, the word νομὰς is more likely than either γαγγραινας or σηπεδόνας to be the term which he supposed to mean Small-Pox, and therefore it will be necessary to examine briefly into its signification in the Greek medical writers.

The word occurs four times in different parts of the Hippocratic Collection,<sup>1</sup> but without anything in the context to determine positively in what sense it is used. It is explained in several parts of Galen's writings:—e. g. "Putrid ulcers, when they spread over<sup>2</sup> the surrounding parts, are properly called νομαί;"<sup>3</sup> and he mentions numerous prescriptions invented by his predecessors for this ailment. Pliny explains the word to mean "mala corporis quae serpunt,"<sup>4</sup> and quotes numerous remedies in different parts of his work. This is the sense given to the word by Foësius, Castellus and Blancardus in their Lexicons, and is probably (with some slight shades of difference,) the meaning that it bears in all the ancient writers;<sup>5</sup> nor is there any reason to believe that it was ever applied to any disease at all resembling the Small-Pox.

(NOTE II. p. 116.)

There were two ancient physicians of the name of Andromachus, the elder of whom was a native of Crete,<sup>6</sup> and physician to the Emperor Nero,<sup>7</sup> A.D. 54-68. He is principally celebrated for having been the first person on whom the title of "Archiater" is known to have been conferred; and also for having been the inventor of the very famous

<sup>1</sup> *Prorrhēt.* ii. vol. i. p. 207. ll. 4, 7: *De Dentit.* vol. i. p. 483. l. 12: *De Ulcer.* vol. iii. p. 322. l. penult.

<sup>2</sup> Literally, *graze over, pass the bounds in grazing, ἐπινέμῃται.*

<sup>3</sup> *De Compos. Medicam. sec. Gen.* v. 14. vol. xiii. p. 851. See also, *De Meth. Med.* v. 4. vol. x. p. 326; *De Simplic. Medicam. Temper. ac Facult.* ix. l. § 4. vol. xii. p. 179: *De Compos. Medicam. sec. Loc.* ix. 5. vol. xiii. p. 288.

<sup>4</sup> *Hist. Nat.* xx. 36.

<sup>5</sup> The word may be found in the following ancient medical writers:—Caelius Aurelianus, *De Morb. Chron.* iv. 8. p. 538; Paulus Aegineta, iv. 44: vi. 85, pp. 60 B., 95. ed. Gr., pp. 522, 587. ed. Lat.; Oribasius, *Synops. ad Eustath.* iii. p. 49; id., *ad Eunap.* iv. 68, p. 655; Joannes Actuarius, *De Meth. Med.* iv. 16: vi. 7. pp. 247, 318, ed. Lat.; Cassius Felix, *Problem. Phys. et Med.* § 2. p. 146. ed. Gr., p. 755. ed. Lat.; Nicolaus Myrepsus, *De Compos. Medicam.* xxxv. 11. p. 721. ed. H. Steph.; Aëtius, i. 2. 6: iv. 2, 17, 49: iv. 4, 41, 92. pp. 65, 690, 713, 799, 830. ed. Lat.

<sup>6</sup> Galen, *De Ther. ad. Pis.* c. 1. vol. xiv. p. 211.

<sup>7</sup> Id. *De Antid.* i. 1. vol. xiv. p. 2.



compound medicine and antidote, called after his name "Theriaca Andromachi."<sup>1</sup>

The younger Andromachus, (ὁ νεώτερος,) who is the person quoted in the text, was the son of the preceding,<sup>2</sup> and appears to have enjoyed much reputation on account of his knowledge of pharmacy and materia medica. He was the author of a work in three books, *Περὶ Συνθέσεως Φαρμάκων*, "On the Composition of Drugs,"<sup>3</sup> of which the first book treated of external remedies, the second of internal, and the third was devoted to those used in diseases of the eyes. This appears to be the work which is very frequently quoted with approbation by Galen in his pharmaceutical treatises, and from which some medical formulæ are extracted by Aëtius and Nicolaus Myrepsus. (See Haller's *Biblioth. Botan.* vol. i. p. 103; Smith's *Dict. of Greek and Roman Biogr.*; and the *Biograph. Dict.* of the Useful Knowledge Society, with the references there given.)

(NOTE JJ. p. 121.)

The Writer has not as yet been able to find any account of the physician named "At-Tarmadî," الترمدي, who is several times quoted by Rhazes. Haller calls<sup>4</sup> him "Tarmidius," and supposes him to have been a Greek, but this is a mistake, as he was (as his name implies,) a native of Tarmed or Termed, a town in Transoxiana, on the banks of the Jihún or Oxus. See D'Herbelot, *Biblioth. Orient.*; Martinière, *Diction. Géograph.*; and Abú-l-Fedá's *Geography*, Paris, 4to. 1840.

(NOTE KK. p. 121.)

It is not quite certain which member of the family of Bachtíshwa<sup>5</sup> ختیشو is here meant; but it is perhaps most probably the son of

<sup>1</sup> See the *Biograph. Dict.* of the Useful Knowledge Society; and Dr. Smith's *Dict. of Greek and Roman Biography*.

<sup>2</sup> Galen, *De Antid.* i. 7. vol. xiv. p. 42.

<sup>3</sup> Choulant, in his *Handb. der Bücherkunde für die Aeltere Medicin*, attributes this work to the elder Andromachus; but a comparison of the following passages of Galen will show that this is incorrect. *De Compos. Medicam. sec. Gen.* i. 16: ii. 1. vol. xiii. pp. 441, 463: *De Antid.* i. 7. vol. xiv. p. 42.

<sup>4</sup> *Biblioth. Medic. Pract.* vol. i. p. 355.

<sup>5</sup> See above, Note GG. The name is sometimes spelled differently: M. de Slane writes it "Bakhtyashû." (Ibn Khallikán, vol. i. p. 317. Engl. Transl.)



Georgius, who is quoted above, § 53. He remained at Jondísábúr, to take care of the hospital there when his father was sent for to Bagdád by the Chalíf Al-Mansúr; and was himself summoned to the same city by the Chalíf Harún Ar-Rashíd, A. H. 171 (A. D. 788.) Here he acquired great honours and reputation by his medical skill, and died about A. H. 185 (A. D. 801.) He wrote two medical works, neither of which appear to be still extant. (See Abú-l-Faraj, *Hist. Dynast.* p. 152-3; Ibn Abí Osaibia'h, viii. 2 MS. Arab.; Wüstenfeld, *Gesch. der Arab. Aertzte*, § 27. p. 15.)

(NOTE LL. p. 123.)

In the Arabic MS. (p. 101, l. 4.) the latter sentence of this paragraph is separated from the former by a large  $\Im$  D. This letter is used very frequently in an Arabic MS. of Ibn Baitár to signify Dioscorides, and occasionally in this present MS. of Rhazes it evidently has the same meaning.<sup>1</sup> Is this the meaning of the letter in this place, and is the latter sentence to be considered as a quotation from Dioscorides? Upon the whole, the Translator has been induced to think otherwise, for the following reasons:—1. As far as he is aware, this would be the only passage in any medical writer which supposes Dioscorides to have mentioned the Small-Pox; 2. It is not attributed to him in the old Latin Translation; 3. No such sentence is quoted from his works by Ibn Baitár,<sup>2</sup> who quotes two passages from his chapter Περὶ Πόως;<sup>3</sup> 4. It is not to be found in the Greek text of Dioscorides; 5. Neither is it contained in a MS. Arabic translation of Dioscorides.<sup>4</sup> At the same time he is obliged to confess that he is unable to explain the meaning of the letter in this place, which (like many others,) requires the assistance of the Arabic MSS. in the Escorial.

<sup>1</sup> Compare (e. g.) p. 32. l. 20. (MS. Arab.) with *Cont. lib. xviii. c. 5, in fine*, in the Latin Translation.

<sup>2</sup> vol. ii. p. 46. *in v. سباق Summák.*

<sup>3</sup> *De Mat. Med.* i. 147. vol. i. p. 138.

<sup>4</sup> This last reason may at first sight appear superfluous or identical with the fourth; but if the Writer had found this sentence introduced into the text of Dioscorides by his Arabic translator, it would have made it (to say the least,) exceedingly probable that Rhazes found the passage in question in his copy of Dioscorides, and therefore *did* mean to quote him in this place.

(NOTE MM. p. 124.)

من تذكرة عبدوس *Min tadhcirat 'Abdūs*. Though this is a very common title to Arabic works, the Writer has not found any such treatise attributed to a physician of the name of 'Abdūs either in Haji Khalfa's *Lex. Bibliograph.*, or in the Index to Nicoll and Pusey's *Catal. MSS. Arab. Biblioth. Bodl.*

With respect to 'Abdūs<sup>1</sup> himself, he is several times quoted by Rhazes, and is called in the old Latin Translation *Abdus*, *Abdusius*, or *Abdux*. His work is sometimes called "De Memoria," or "De Memoriali," and sometimes (unless it be a different treatise,) "Summa."<sup>2</sup> He may perhaps be the same person as عبدوس بن زيد (يريد) 'Abdūs Ibn Zaid (or *Yezīd*) who lived in the third century after the Hejrah, (i.e., the ninth of the Christian era,) and wrote a work on the interpretation of dreams.<sup>3</sup>

(NOTE NN. p. 124.)

The Translator is sorry to confess that he is not at present able to explain or illustrate this sentence which is rendered in the old Latin Version as follows:—"Accipe aquam ungularum arietis cum assantur, et inunge ex ea locum," &c. The same expression occurs in Avicenna, among the substances enumerated in the chapter "De Eradicacione Vestigiorum Variolarum,"<sup>4</sup> where the Latin Translation mentions "aqua quae fit in ungula cameli quae assatur," with the various reading of *arietis* instead of *cameli*. This is easily explained, when it is stated that the only difference between حمل *hamal*, "a ram," and جمل *jaml*, "a camel," is one single point.

<sup>1</sup> Channing appears to consider 'Abdūs to be the name of a book; his Note is as follows:—"In libro Abdus—cujus sit incertum est."

<sup>2</sup> See Fabricii *Biblioth. Graeca*, vol. xiii. p. 20. ed. vet.

<sup>3</sup> See Ibn Abī Osaibi'ah, cap. viii. § 13 (MS. Arab.); Wüstenfeld, *Gesch. der Arab. Aertzte*. § 43. p. 19.

<sup>4</sup> iv. 1, 4, 12. vol. ii. p. 76. ed. Lat., vol. ii. p. 38. l. 6. ed. Arab.

## (NOTE OO. p. 129.)

There is great doubt about this name. In the Latin Translation it is called *Achorosochos*, upon which Channing justly remarks, "Quis significetur per illud monstrum nominis a Feragio fabricatum nescio." The following names occur in the "Elenchus Medicorum Veterum," in the thirteenth volume of the old edition of Fabricii *Biblioth. Graeca*:—

"*Ateuristus*, [*Ἀτεῦριστος*,] quisquis is fuit, apud Galenum, in praefatione lib. x. *Simplicium*; ejus 'De Medicina ex Animalibus,' t. ii. p. 131." [vol. xii. p. 251.]

"*Athuristus*, sive *Aturistus*, (utrumque enim reperio,) apud Rasim lib. iii. *Continensis*, cap. 1. non semel, et lib. iii. cap. 6, et lib. vii. cap. 3; et alibi saepe. Et idem forte est cum *Ateuristo*, de quo supra; aut cum *Atorosco*, de quo mox dicemus."

"*Athursekis*, *ibid.* lib. iii. cap. 3."

"*Atoroscos*, Rasi *Continensis*, lib. i. cap. 6."

"*Atorosphos*, *ibid.* lib. ii. cap. 5 et 6."

"*Atursius*, *ibid.* lib. iii. cap. 7."

"*Hateroscos*, Rasi lib. *Continensis* ii. cap. 4."

Haller, in his list of Greek physicians quoted by Rhazes, writes as follows:<sup>1</sup>—

"*Athuriscus*. (*Contin.* l. viii.) Adipem delphini adversus hydropem laudat (*ib.* l. vii.), et medicamentum habet ad diarrhoeam (l. vi.)

"Idem, ut puto, *Atursius*, qui de urina a potu egit (l. iii.), et *Atahusius*, *Hatorostos*, *Accursius*, *Atorosphos*; sed si idem fuerit *Achorosochos*, Arabs erit aut Graecus nuperior, cum de variolis scripserit (l. xviii.)"

To this it may be added that the name occurs at least twice in Ibn Baitár, where it is written by Sontheimer *Athursakin* (i. 94.) and *Athursofos* (ii. 45.), which latter form is hesitatingly accepted by a much abler scholar, F. R. Dietz, in his *Analecta Medica*, p. 73.

It may be safely assumed that all these names that occur in Rhazes and Ibn Baitár belong to the same individual; so that it only remains to endeavour to decide what his real name is, and whether he is the person mentioned by Galen. In different MSS. of these two writers the Translator has met with the name altogether more than a dozen times, written *اطهورسفس* *a-t-h-u-r-s-f-s* or *اطهورسقس*

<sup>1</sup> *Biblioth. Medic. Pract.* vol. i. p. 354, 5.

*a-t-h-u-r-s-k-s*;<sup>1</sup> which certainly looks so unlike an Arabic name, and so like a Greek one, (however barbarous its formation,) that it is difficult to conceive it to be anything else. Upon the whole, *Ateuriscus* appears the most probable Greek name that can in any way be made out of the above Arabic letters; but the Translator is not entirely satisfied with his conjecture, and will be very glad if any scholar can suggest anything less objectionable. With respect to the identity of this physician with the Ateuristus mentioned by Galen, as that name occurs only *once*, it is possible that in that single passage 'Ατεύριστος may be a mistake for 'Ατεύρισκος, and the difficulty of supposing Ateuristus (or Ateuriscus) to have mentioned the Small-pox in his writings is not greater than that of believing Galen himself to have been acquainted with that disease.

<sup>6</sup> It is hardly necessary to specify that in one or two MSS. there is a ظ instead of a ط, and in one MS. سفین instead of سفن.

## INDICES.





## ARABIC INDEX.

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### ADVERTISEMENT.

THERE is so great a diversity in the modes of writing Arabic words in European characters adopted by different scholars, even of the same nation, that it becomes in a manner necessary for every individual to state briefly the system used by himself: for which reason, and also because this Index will probably be used by several persons who may wish to know the Arabic name of a drug, animal, &c., even though they are unable to read the Arabic characters, it seemed advisable to draw up the following table, by the help of which, any person may find the word that he is in search of without much trouble.<sup>1</sup> The system of orthography adopted by the Translator is probably not the most strictly accurate, nor precisely such as he would have used in a work that was likely to be read chiefly by oriental scholars; but upon the whole he thought it best to study simplicity as much as possible, and to write the words in such a way as would not perplex and disgust the English reader with a greater number of strange characters and uncouth combinations than was absolutely necessary. At the same time, as his orthography agrees nearly with the systems of Pococke,<sup>2</sup> Sir William Jones,<sup>3</sup> and Dr. Robinson,<sup>4</sup> it is hoped that even an Arabic scholar will not find in it much to offend him.

<sup>1</sup> To have attempted to make the subject perfectly clear to a non-oriental scholar would have led the Translator into lengthy details quite unsuited to this work; and therefore he will merely request the reader to bear in mind, 1. that the *essential* form of most of the Arabic letters, as is the case with our own *written* characters, is subject to some slight modification when they are found at the *end* of a word, or joined to the preceding or following letter; and 2. that, in most cases throughout the book, when, in any Arabic word expressed in European letters, a vowel has no accent over it, it has no equivalent in the accompanying Arabic characters.

<sup>2</sup> In his edition of Abú-l-Faraj; see *Index*.

<sup>3</sup> "Dissertation on the Orthography of Asiatick Words in Roman Letters," in his *Works*, vol. iii.

<sup>4</sup> *Biblical Researches in Palestine*, vol. iii. Second Appendix.

## ARABIC ALPHABET.

1. ا *Alif*. In the middle or end of a word is expressed by *a*, sounded like *a* in *father*. At the beginning it is expressed by different vowels, so that every word in European characters which begins with a vowel *not* preceded by an apostrophe, (thus *a, e, i, o, u,*) may be supposed to begin in Arabic with this letter.
2. ب *Ba*, is expressed by *b*, and sounded like *b*.
3. ت *Ta*, . . . . . *t*, . . . . . *t*.
4. ث *Tha*, . . . . . *th*, . . . . . *th* in *thin*.
5. ج *Jim*, . . . . . *j*, . . . . . *j*.
6. ح *Ha*, . . . . . *h*, . . . . . *h*.
7. خ *Cha*, . . . . . *ch*, . . . . . *ch* in *character*.
8. د *Dal*, . . . . . *d*, . . . . . *d*.
9. ذ *Dhal*, . . . . . *dh*, . . . . . *th* in *this*.
10. ر *Ra*, . . . . . *r*, . . . . . *r*.
11. ز *Za*, . . . . . *z*, . . . . . *z*.
12. س *Sin*, . . . . . *s*, . . . . . *s*.
13. ش *Shin*, . . . . . *sh*, . . . . . *sh*.
14. ص *Sad*, . . . . . *s*, . . . . . *s*.
15. ض *Dad*, . . . . . *d*, . . . . . *d*.
16. ط *Ta*, . . . . . *t*, . . . . . *t*.
17. ظ *Dha*, . . . . . *dh*, . . . . . *th* in *this*.
18. ع 'Ain, may be represented by an apostrophe, (thus '*a, 'e, 'i, 'o, 'u,*) as there is no corresponding European sound or character.
19. غ *Gain*, is expressed by *g*, and sounded like *g* in *go*.
20. ف *Fa*, . . . . . *f*, . . . . . *f*.
21. ق *Kaf*, . . . . . *k*, . . . . . *k*.
22. ك *Caf*, . . . . . *c*, . . . . . *c* in *cat*.
23. ل *Lam*, . . . . . *l*, . . . . . *l*.
24. م *Mim*, . . . . . *m*, . . . . . *m*.
25. ن *Nun*, . . . . . *n*, . . . . . *n*.
26. ه *He*, . . . . . *h*, . . . . . *h*.
27. و *Waw*, at the beginning of a syllable is expressed by *w*, and sounded like that letter. In other cases it is expressed by *u*, and sounded like *oo* in *food*.
28. ي *Ya*, at the beginning of a syllable is expressed by *y*, and sounded like that letter. In other cases it is expressed by *i*, and sounded like *i* in *machine*.

# ARABIC INDEX.<sup>1</sup>

اِبِل IBL, a Camel. 245. [See جمل JAML.]

اَبَنُوس ÁBENÚS, or اَبَانُوس ÁBÁ-  
NÚS. (See Avicenna,<sup>2</sup> ii. 229. vol. i.  
p. 310. ed. Lat., vol. i. p. 134. ed. Arab.;  
Ibn Baīṭār, vol. i. p. 8.) *Gr. Transl.*,  
\*Εβεινος. (See Dioscorides, i. 129.  
vol. i. p. 121; Galen, vi. 5. § 2. vol. xi.  
p. 867.) *Lat.*, Ebenus. (*Diospyrus*  
*Ebenum*, Retz.) *Engl.*, Ebony. 146, 150.

اَتْرَج UTRUJ, or اَتْرَاج UTRÁJ. (See  
Avicenna, ii. 119. vol. i. p. 286. ed. Lat.,  
vol. i. p. 133. ed. Arab.; Ibn Baīṭār,  
vol. i. p. 11.) *Gr. Transl.*, Κίτρον.  
(See Dioscorides, i. 166. vol. i. p. 150.  
Μήλον Μηδικόν; Galen, vii. 12. § 19.  
vol. xii. p. 77.) *Lat.*, Citrium. (*Citrus*  
*medica*, Linn.) *Engl.*, Citron. 50, 60,  
68, 72, 241.

اَثَل ÁTHL. (See Ibn Baīṭār, vol. i.  
p. 13.) *Gr.*, \*Ακακαλός. (See Di-  
oscorides, i. 118. vol. i. p. 114.)  
*Lat.*, Acacalis. (*Tamarix orientalis*,  
Forsk.) *Engl.*, White Tamarisk. [See

كزمازك CIZMÁZEC.]

اِثْمِد ITHMID. (See Avicenna, ii. 7.  
vol. i. p. 261. ed. Lat., vol. i. p. 129.  
ed. Arab.; Ibn Baīṭār, vol. i. p. 15.)  
*Gr.*, Στρίμμι. (See Dioscorides, v. 99.  
vol. i. p. 762; Galen, ix. 3. § 29. vol.  
xii. p. 236.) *Lat.*, Stibium, or Anti-  
mony. (*Antimonii Sesquisulphure-*  
*tum*.) *Engl.*, Sesquisulphuret of Anti-  
mony. 219, 254. p. 155.

اَجَاص IJJAŞ. (See Avicenna, ii. 539.  
vol. i. p. 372. ed. Lat., vol. i. p. 134. ed.  
Arab.; Ibn Baīṭār, vol. i. p. 16.) *Gr.*  
*Transl.*, Δαμάσκηνον.† (See Diosco-  
rides, i. 174. vol. i. p. 153. Κοκκινμη-  
λέα; Galen, vii. 10. § 35. vol. xii.  
p. 32.) *Lat.*, Prunum Damascenum.  
(*Prunus domestica*, De Cand.) *Engl.*,  
Damask Plum. 58, 178.

اِخْتِصَارَات ICHTISÍRÁT. p. 105.  
Note (\*).

اِرْز ÁRUZ. (See Avicenna, ii. 574. vol.  
i. p. 380. ed. Lat., vol. i. p. 138. ed.  
Arab.; Ibn Baīṭār, vol. i. p. 24.) *Gr.*  
*Transl.*, \*Ορυζα. (See Dioscorides, ii.  
117. vol. i. p. 239; Galen, viii. 15.  
§ 16. vol. xii. p. 92.) *Lat.*, Oryza.  
(*Oryza sativa*, Linn.) *Engl.*, Rice. 132,  
152, 225, 229, 230, 247.

\* Omitted in the Greek Translation.

† Ἐπεὶ δὲ πλείστον ἐν τῇ τῶν Δαμα-  
σκηνῶν ἐστὶ χώρα τὸ κοκκὺ μῆλον  
καλούμενον, καὶ κάλλιστα γεωργεῖται,

ἰδίως καλεῖται τὸ ἀκρόδρνον Δαμα-  
σκηνόν, ὥς διάφορον τῶν κατὰ τὰς  
ἄλλας χώρας γινομένων. (Athenaeus,  
*Deipnosoph.* ii. 33. p. 49.)

<sup>1</sup> This Index contains the names of all the articles in *Materia Medica* mentioned by Rhazes, and the few Arabic words explained in the Notes. In the latter cases the figures (which are all preceded by the letter *p.*) refer to the pages of this edition; but in the case of the drugs, &c. it seemed better to refer to the pages of Channing's edition, as this method will be equally convenient to the English reader, and much more useful to any one who may wish to consult the Arabic text.

<sup>2</sup> Ed. Venet. 1595. 2 vols. fol.

أس, or الأس AL-ÁS. (See

Avicenna, ii. 453. vol. i. p. 352. ed. Lat., vol. i. p. 126. ed. Arab.; Ibn Baïtár, vol. i. p. 38.) *Gr. Transl.*, *Μυρσίνη*. (See Dioscorides, i. 155. vol. i. p. 144.; Galen, vii. 12. § 31. vol. xii. p. 81.) *Lat.*, Myrtus. (*Myrtus communis*, Linn.) *Engl.*, Myrtle. 132, 134, 136, 216, 222, 230, 245, 246, 254.

اسفیدباج = ISFIDABÁJ. p. 39.

Note (3).

اشق USHAK. (See Avicenna, ii. 8. vol. i. p. 262. ed. Lat., vol. i. p. 130. ed. Arab.; Ibn Baïtár, vol. i. p. 48.) *Gr. Transl.*, *Ἀμμωνιακόν*. (See Dioscorides, iii. 88. vol. i. p. 439.; Galen, vi. i. § 37. vol. xi. p. 828.) *Lat.*, Ammoniacum. (*Dorema Ammoniacum*, Don.\*) *Engl.*, Ammoniacum. 148, 229.

اشنان USHNÁN. (See Avicenna, ii. 722. vol. i. p. 407. ed. Lat., vol. i. p. 131. ed. Arab.; Ibn Baïtár, vol. i. p. 53.) *Lat.*, Herba Alkali. (*Salsola Kali*, Linn.) *Engl.*, Prickly Saltwort. 228.

اصفهانى ISFAHÁNÍ. p. 155.

افثيمون ÁFTHÍMÚN, or افثيمون AFITIMÚN. p. 139. Note (7).

افيون UFYÚN. (See Avicenna, ii. 526. vol. i. p. 366. ed. Lat., vol. i. p.

133. ed. Arab.; Ibn Baïtár, vol. i. p. 64.) *Gr. Transl.*, *Ὀπίον*. (See Dioscorides, iv. 65. vol. i. p. 554; *Μήκων*.) *Lat.*, Opium. (*Papaver somniferum*, Linn.) *Engl.*, Opium. 78.

اقايا ÁKÁKÍÁ, or كاكيا KÁKÍÁ.

(See Avicenna, ii. 3 vol. i. p. 260. ed. Lat., vol. i. p. 126. ed. Arab.; Ibn Baïtár, vol. ii. p. 276.†) *Gr. Transl.*, *Ἀκακία*. (See Dioscorides, i. 133. vol. i. p. 127. Galen, vi. 1. § 12. vol. xi. 816.) *Lat.*, Acacia. (*Acacia vera*, Willd.) *Engl.*, Acacia. 110, 241.

الاکحل AL-ÁCHAL, the median vein. p. 152. Note L.

الکلیل الملك ICLÍLU-L-MALÍC.‡

(See Avicenna, ii. 452. vol. i. p. 351. ed. Lat., vol. i. p. 124. ed. Arab.; Ibn Baïtár, vol. i. p. 71.) *Gr. Transl.*, *Μελίλωτος*. (See Dioscorides, iii. 41. vol. i. p. 388; Galen, vii. 12. § 8, vol. xii. p. 70.) *Lat.*, Melilotus. (*Melilotus officinalis*, Willd.) *Engl.*, Melilot. 128, 235.

الامروسيا AL-ÁMRÚSÍÁ, "Confectio Ambrosia." p. 166. Note (2).

املج ÁMLAJ. (See Avicenna, ii. 227. vol. i. p. 310. ed. Lat., vol. i. p. 128. ed. Arab.; Ibn Baïtár, vol. i. p. 78.) *Gr. Transl.*, *Χρυσοβάλανος*.¶ *Lat.*, Emblica. (*Emblica officinalis*, Gaertn.) *Engl.*, Emblic Myrobalans. 136.

\* There seems to be some confusion here. As Rhazes was a native of Chorásán we may presume that it is the *Persian* Ammoniacum to which he alludes, and therefore Mr. Don's name has been applied to it: but, on the other hand, Ibn Baïtár in his description of the substance expressly quotes the passages of Dioscorides and Galen referred to above, though the Ammoniacum of the Greeks and Romans is supposed to be the produce of *Ferula Tingitana*, Lindl. See Dr. Pereira's *Mater. Med.* p. 1464, &c. ed. 2nd.

† Described more fully by Ibn Baïtár

under the name قراط KARADH, vol. ii. p. 291.

‡ Literally "The king's crown."

¶ The word *Χρυσοβάλανος* seems to be used somewhat vaguely by the Greek Translator, as he gives this name also to the

اهليلج IHLÍLAJ, or *Chebule Myrobalans*; which would seem to be the more correct use of the name, as the word *χρυσός* is scarcely applicable to a fruit of a dark grey colour. The name probably occurs for the first time in Galen, (*De Compos. Medicam. sec. Locos*, viii. 3. vol. xiii. p. 147, and in other places,) who quotes from Asclepiades Pharmacion.



انبرباريس ÁMBÁRBÁRIS. (See Avicenna, ii. 11. vol. i. p. 262. ed. Lat., vol. i. p. 131. ed. Arab.; Ibn Baítár, vol. i. p. 79.) *Gr. Transl.*, 'Οξύκανθα. *Lat.*, Berberis. (*Berberis vulgaris*, Linn.) *Engl.*, Barberry.\* 66, 72, 184.

اندراني ÁNDARÁNÍ. p. 157. Note P.

عنزروت ÁNZARÚT. [See عنزروت 'ANZARÚT.]

اهليلج IHLÍLAJ, or هليلج HALÍLAJ.

(See Avicenna, ii. 457. vol. i. p. 353. ed. Lat., vol. i. p. 162. ed. Arab.; Ibn Baítár, vol. ii. p. 572.) *Gr. Transl.*, Χρυσοβάλανος. *Lat.*, Myrobalanus. (*Terminalia Chebula*, Retz.) *Engl.*, Chebule Myrobalans. 176.

بابونج BÁBÚNAJ. (See Avicenna, ii. 121. vol. i. p. 286. ed. Lat., vol. i. p. 139. ed. Arab.; Ibn Baítár, vol. i. p. 106.) *Gr. Transl.*, Χαμαίμηλον. (See Dioscorides, iii. 144. vol. i. p. 482. 'Ανθεμίσ; Galen, vi. i. § 47. vol. xi. p. 833.) *Lat.*, Chamaemelum. (*Matricaria Chamomilla*, Linn.) *Engl.*, Common Wild Chamomile. 128, 235, 243.

الباسليق AL-BÁSILÍK, the basilic vein. p. 152. Note K.

باقلي BÁKILA. (See Avicenna, ii. 244. vol. i. p. 314. ed. Lat., vol. i. p. 148.

ed. Arab.; Ibn Baítár, vol. i. p. 112.) *Gr. Transl.*, Κύαμος. (See Dioscorides, ii. 127. vol. i. p. 246.; Galen, vii. 10. § 59. vol. xii. p. 49.) *Lat.*, Faba. (*Faba vulgaris*, Linn.) *Engl.*, Bean. 152, 154, 215, 228, 235.

بان BÁN. (See Avicenna, ii. 82. vol. i. p. 278. ed. Lat., vol. i. p. 139. ed. Arab.; Ibn Baítár, vol. i. p. 115.) *Gr. Transl.*, Καρποβάλαμον.† (See Dioscorides, iv. 157. vol. i. p. 645. Βάλανος Μυρεψική; Galen, vi. 2. § 1. vol. xi. p. 844.) *Lat.*, Glans Unguentaria. (*Hyperanthera Moringa*, Vahl.) *Engl.*, Ben Nut. 126, 152, 229, 230.

بشور BUTHÚR, pustules. 223, 234, 235, 247. p. 32. Note (1), p. 40. Note (3).

بسد BUSSAD. (See Avicenna, ii. 123. vol. i. p. 287. ed. Lat., vol. i. p. 147. ed. Arab.; Ibn Baítár, vol. i. p. 137.) *Gr.*, ‡ Κοράλλιον. (See Dioscorides, v. 138. vol. i. p. 805.) *Lat.*, Corallium. (*Isis nobilis*, Linn.) *Engl.*, Coral. 146, 152.

بطيخ BITTÍCH. (See Avicenna, ii. 91. vol. i. p. 281. ed. Lat., vol. i. p. 143. ed. Arab.; Ibn Baítár, vol. i. p. 145.) *Gr. Transl.*, Πέπων. (See Dioscorides, ii. 163. vol. i. p. 278.; Galen, viii. 18. § 14. vol. xii. p. 121.) *Lat.*, Pepo. (*Cucurbita Pepo*, Linn.) *Engl.*, Melon. 56, 152, 154, 164, 228, 229, 230, 235, 253.

بعر BA'R. (See Avicenna, ii. 607. vol. i. p. 387. ed. Lat., vol. i. p. 150.

\* Though this word (which is sometimes written

امبرباريس ÁMBÁRBÁRIS, or اميرباريس ÁMÍRBÁRIS,) is rendered 'Οξύκανθα in the Greek Translation, it does in fact signify quite a different tree, which is not noticed by Dioscorides or Galen: the 'Οξύκανθα (*Mespilus Pyracantha*, Linn.) is described by Dioscorides, i. 122. vol. i. p. 116, and by Galen, viii. 15. § 11. vol. xii. p. 90. See Dr. Royle's paper "On the *Lycium*

of Dioscorides," in the *Trans. of the Linn. Soc.* vol. xvii. p. 83, &c.

† This name seems to be incorrectly used, as the word καρποβάλαμον is believed to refer to the fruit of *Amyris Opobalsamum*, Linn. (See Guibourt, *Hist. des Drogues*, vol. ii. p. 278.) The word probably occurs for the first time in Galen, (*De Compos. Medicam. sec. Locos*, viii. 3. vol. xiii. p. 159, and in other places,) who quotes from Asclepiades Pharmacion.

‡ Omitted in the Greek Translation.

ed. Arab.\* *Gr.*, Κοπρός. (See Dioscorides, ii. 98. vol. i. p. 223 Ἀπόπατος; Galen, x. 2. § 18 sq. vol. xii. p. 290 sq.) *Lat.*, Stercus. *Engl.*, Dung. 229, 248.

بقر BAKR. (See Ibn Baīṭār, vol. i. p. 156.) *Gr.*, Βούς (See Dioscorides, ii. 98. vol. i. p. 223; Galen, x. 2. § 23. vol. xii. p. 300.) *Lat.*, Bos. (*Bos Taurus*, Linn.) *Engl.*, Ox. 248.

بقلة الحمقاء BAKLATU-L-HAM-KÁ. (See Avicenna, ii. 541. vol. i. p. 372. ed. *Lat.*, vol. i. p. 146. ed. Arab.; Ibn Baīṭār, vol. i. p. 151.) *Gr. Transl.*, Ἀνδράχνη. (See Dioscorides, ii. 150. vol. i. p. 265; Galen, vi. 1. § 43. vol. xi. p. 830.) *Lat.*, Portulaca. (*Portulaca oleracea*, Linn.) *Engl.*, Purslain. 54, 66.

بقلة اليمانية BAKLATU-L-YE-MÁNÍYAH. (See Avicenna, ii. 525. vol. i. p. 366. ed. *Lat.*, vol. i. p. 142. ed. Arab.; Ibn Baīṭār, vol. i. p. 154.) *Gr. Transl.*, Βλήρον. (See Dioscorides, ii. 143. vol. i. p. 260; Galen, vi. 2. § 8. vol. xi. p. 851. *Blíron*.) *Lat.*, Blitum. (*Blitum capitatum*, Linn.) *Engl.*, Strawberry Blite. 54.

بل BAL, a species of cucumber. p. 122. Note (1).

بلوط BALLÚT. (See Avicenna, ii. 285. vol. i. p. 323. ed. *Lat.*, vol. i. p. 148. ed. Arab.; Ibn Baīṭār, vol. i. p. 164.) *Gr.*, Δρῦς. (See Dioscorides, i. 142. vol. i. p. 136; Galen, vi. 4. § 11. vol. xi. p. 865.) *Lat.*, Quercus. (*Quercus Robur*, Linn.) *Engl.*, Oak. 222, 225, 250.

البنداديقون AL-BENDÁDÍKÚN, the "Pentadicon," p. 166. Note (1).

بنفسج BANAFSAJ. (See Avicenna, ii. 724. vol. i. p. 407. ed. *Lat.*, vol. i. p. 140. ed. Arab.; Ibn Baīṭār, vol. i. p. 170.) *Gr. Transl.*, ἴον. (See Dioscorides, iv. 120. vol. i. p. 607; Galen, vi. 9. § 3. vol. xi. p. 889.) *Lat.*, Viola. (*Viola odorata*, Linn.) *Engl.*, Violet. 128, 154, 178, 225, 229, 235, 250.

بورق BAURAK. (See Avicenna, ii. 87. vol. i. p. 280. ed. *Lat.*, vol. i. p. 141. ed. Arab.; Ibn Baīṭār, vol. i. p. 187. *Gr. Transl.*, Νίτρον. (See Dioscorides, v. 129, 130. vol. i. p. 797; Galen, ix. 3. § 18. vol. xii. p. 225.) *Lat.*, Nitrum. (*Potassae Nitras fusa?*)† *Engl.*, Sal Prunella (?). 142, 148, 150, 156, 229.

بول BAUL. (See Avicenna, ii. 725. vol. i. p. 408. ed. *Lat.*, vol. i. p. 149. ed. Arab.; Ibn Baīṭār, vol. i. p. 191.) *Gr. Transl.*, Οὔρον. (See Dioscorides, ii. 99. vol. i. p. 227; Galen, x. 2. § 15. vol. xii. p. 284.) *Lat.*, Urina. *Engl.*, Urine. 84, 146.

بيض BAID. (See Avicenna, ii. 527. vol. i. p. 366. ed. *Lat.*, vol. i. p. 143. ed. Arab.; Ibn Baīṭār, vol. i. p. 193.) *Gr.*, Ὠόν. (See Dioscorides, ii. 54. vol. i. p. 188; Galen, xi. 1. § 31. vol. xii. p. 349.) *Lat.*, Ovum. *Engl.*, Egg. 229.

تدرج TADRAJ. (See Ibn Baīṭār, vol. i. p. 202.) *Gr.*, ‡ Φασιανός. *Lat.*, Phasianus. (*Phasianus Colchicus*, Linn.) *Engl.*, Pheasant. 48.

ترمس TARMAS. (See Avicenna, ii. 447. vol. i. p. 350. ed. *Lat.*, vol. i. p. 263. ed. Arab.; Ibn Baīṭār, vol. i. p. 203.) *Gr. Transl.*, Θέρμος. (See Dioscorides, ii. 132. vol. i. p. 252;

\* Described by Ibn Baīṭār under the name زبل Zibl.

† On the *Nitrum* of the ancients, see Beckmann's *Hist. of Inventions*, &c. vol. ii. p. 482 sq. ed. 1846; Dr. Pereira's *Ma-*

*ter. Med.* vol. i. pp. 506, 543, and 555; Dr. Marx's review of Sontheimer's *Ibn Baīṭār in the Hannov. Ann.* 6. Jahrg. Hft. 5. p. 608; and an article by Dr. Fr. Harless in Henschel's "Janus," vol. i. p. 455.

‡ Omitted in the Greek Translation.

Galen, vi. 8. § 3. vol. xi. p. 885.)  
*Lat.*, Lupinus. (*Lupinus Termes*, Forsk.)  
*Engl.*, Lupine. 152, 229, 230, 248.

ترنجابین TARANJABÍN. (See Avicenna, ii. 702. vol. i. p. 404. ed. Lat.,

vol. i. p. 262. ed. Arab.; Ibn Baitár, vol. i. p. 207.) *Gr. Transl.*, Τρικύμνον.\*

*Lat.*, Terengiabin. (*Manna of the حاج*

هأج.) *Engl.*, Taranjabín. 178, 214.

تفاح TUFFÁH. (See Avicenna, ii. 569. vol. i. p. 378. ed. Lat., vol. i. p. 264. ed. Arab.; Ibn Baitár, vol. i. p. 208.) *Gr. Transl.*, Μηλον. (See Dioscorides, i. 159. vol. i. p. 147; Galen, vii. 12. § 16. vol. xii. p. 75.) *Lat.*, Pomum. (*Pyrus Malus*, Linn.) *Engl.*, Apple. 60.

تمر TAMR. (See Ibn Baitár, vol. i. p. 211.) *Gr. Transl.*, Φῶινξ. (See Dioscorides, i. 143. vol. i. p. 139; Galen, viii. 21. § 6. vol. xii. p. 151; id. *De Aliment. Facult.* ii. 26. vol. vi. p. 606.) *Lat.*, Dactylus. (*Phoenix dactylifera*, Linn.) *Engl.*, Date. 30, 54, 126, 232.

تنقّط TANAFFAT, vesicles. p. 32. Note (¹).

توت TÚT or ثوث TÚTH. (See Avicenna, ii. 498. vol. i. p. 361. ed. Lat., vol. i. p. 265. ed. Arab.; Ibn Baitár, vol. i. p. 215.) *Gr. Transl.*, Συκόμορον, and Συκομόριον. (See Dioscorides, i. 180. vol. i. p. 158, Μορέα; Galen, vii. 12. § 23. vol. xii. 78.) *Lat.*, Morus. (*Morus alba*, Linn.) *Engl.*, White Mulberry. 50, 72, 118.

توتیا TÚTÍA. (See Avicenna, ii. 703.

vol. i. p. 404. ed. Lat., vol. i. p. 262. ed. Arab.; Ibn Baitár, vol. i. p. 217.) *Gr. Transl.*, Τούτια. *Lat.*, Tutia. (*An impure oxide of zinc*.†) *Engl.*, Tutty. 146.

تین TÍN. (See Avicenna, ii. 282. vol. i. p. 321. ed. Lat., vol. i. p. 264. ed. Arab.; Ibn Baitár, vol. i. p. 221.) *Gr. Transl.*, Σύκον. (See Dioscorides, i. 183. vol. i. p. 161; Galen, viii. 18. § 43. vol. xii. p. 132.) *Lat.*, Ficus. (*Ficus Carica*, Linn.) *Engl.*, Fig. 30, 58, 98, 102, 205, 228, 235, 245, 248.

جوارس JÁWARS. (See Avicenna, ii. 294. vol. i. p. 325. ed. Lat., vol. i. p. 156. ed. Arab.; Ibn Baitár, vol. i. p. 237.) *Gr. Transl.*, Κέγχρος. (See Dioscorides, ii. 119. vol. i. p. 240; Galen, vii. 10. § 15. vol. xii. p. 16.) *Lat.*, Milium. (*Panicum spicatum*, Linn.) *Engl.*, Common Millet. 132, 215, 225, 230, 250, 254, 257.

جاوشیر JÁWASHÍR. (See Avicenna, ii. 528. vol. i. p. 367. ed. Lat., vol. i. p. 151. ed. Arab.; Ibn Baitár, vol. i. p. 235.) *Gr.*, Πάνακες Ἡράκλειον. (See Dioscorides, iii. 48. vol. i. p. 396; Galen, viii. 16. § 4. vol. xii. p. 94.) *Lat.*, Panaces Heracleon. (*Opopanax Chironium*, Koch.) *Engl.*, Opopanax. p. 106. Note (⁶).

جدري JADARÍ, Small-Pox. p. 135.

جراد JARÁ'D. (See Avicenna, ii. 395. vol. i. p. 339. ed. Lat., vol. i. p. 154.† ed. Arab.; Ibn Baitár, vol. i. p. 246.) *Gr.*, ¶ Ἀκρίς. (See Dioscorides, ii. 57. vol. i. p. 189.) *Lat.*, Locusta. (*Gryllus migratorius*, Linn.) *Engl.*, Locust. 54.

\* Τρικύμνον, a word which the Translator has never before met with, and which he does not find noticed in any Greek Lexicon.

† Dr. Royle has assured the Translator that the word توتیا TÚTÍA is applied

in the East to the sulphates of zinc, of iron, and of copper, as well as to the impure oxide of zinc.

‡ The title of this chapter is printed by mistake جداد Jadád.

¶ Omitted in the Greek Translation.

**جرجير** JIRJÍR. (See Avicenna, ii. 230. vol. i. p. 310. ed. Lat., vol. i. p. 156. ed. Arab.; Ibn Baitár, vol. i. p. 244.) *Gr.*\* *Ἐϋζωμον*. (See Dioscorides, ii. 169. vol. i. p. 282; Galen, *De Aliment. Facult.* ii. 53. vol. vi. p. 639.) *Lat.*, Eruca. (*Brassica Eruca*, Linn.) *Engl.*, Rocket. 152, 156.

**جلاب** JULÁB, Julep. p. 65. Note (1).

**جلنار** JULNÁR. (See Avicenna, ii. 112. vol. i. p. 284. ed. Lat., vol. i. p. 153. ed. Arab.; Ibn Baitár, vol. i. p. 251.) *Gr. Transl.*, [Φύλλα] Αἰγύπτου Ῥόδου. (See Dioscorides, i. 154. vol. i. p. 144. Βαλαύστιον; Galen vi. 2. § 3. vol. xi. p. 847.) *Lat.*, Balaustium. (*Punica Granatum*, Linn.) *Engl.*, Balaustines, or Pomegranate Flowers. 68, 184, 224, 246.

**جلنجبین** JULANJABÍN, Rosed honey. p. 128. Note (1).

**جمل** JÁML. (See Ibn Baitár, vol. i. p. 259.) *Gr.*, Κάμηλος. *Lat.*, Camelus. (*Camelus Bactrianus*, Linn.) *Engl.*, Bactrian Camel. p. 172. Note NN.

**حاج** HÁJ. (See Ibn Baitár, vol. i. p. 278.) *Gr.*, Ἐρείκη. (See Dioscorides, i. 117. vol. i. p. 114; Galen, vi. 5. § 19. vol. xi. p. 877.) *Lat.*, Erica. (*Alhagi Maurorum*, Tourn.) *Engl.*, Camel's Thorn. [See **ترنجبین** TARANJABÍN.]

**حرف** HURF. (See Avicenna, ii. 509. vol. i. p. 363. ed. Lat., vol. i. p. 173. ed. Arab.; Ibn Baitár, vol. i. p. 299.) *Gr.*, Κάρδαμον. (See Dioscorides, ii. 184. vol. i. p. 294; Galen, vii. 10. § 8. vol. xii. p. 11.) *Lat.*, Nasturtium. (*Lepidium sativum*, Linn.) *Engl.*, Common Cress. 229.

**حصبه** HAŞBAH, Measles. p. 135.

**حصرم** HİŞRİM. (See Ibn Baitár, vol. i. p. 309.) *Gr. Transl.*, Ὀμφαξ.† (See Dioscorides, v. 6. vol. i. p. 691.) *Lat.*, Omphacium. *Engl.*, Juice of Unripe Grapes. 48, 50, 52, 60, 68, 72, 110, 166, 215.

**حصرمیه** HİŞRİMİYAH. p. 37. Note (4).

**حصف** HAŞAF. p. 121. Note (8).

**حضض** HUDAD. (See Avicenna, ii. 398. vol. i. p. 339. ed. Lat., vol. i. p. 172. ed. Arab.; Ibn Baitár, vol. i. p. 311.) *Gr. Transl.*, Κροκολύτης.‡ (See Dioscorides, i. 132. vol. i. p. 125. Λύκιον; Galen, vii. 11. § 20. vol. xii. p. 63.) *Lat.*, Lycium. (*Berberis Lycium*, Royle, and *Berberis aristata*, De Cand.) *Engl.*, Rusot.¶ 110, 124, 243.

**حل** HALL, or **خل** CHALL. [See **دهن حل** DUHN HALL.]

**حمار** HIMÁR. (See Avicenna, ii. 55. vol. i. p. 270. ed. Lat., vol. i. p. 180. ed. Arab.; Ibn Baitár, vol. i. p. 329.) *Gr.*, ὄνος. (See Dioscorides, ii. 42 & 44. vol. i. p. 184; Galen, xi. 1. § 17. vol. xii. p. 341.) *Lat.*, Asinus. (*Asinus vulgaris*, Linn.) *Engl.*, Ass. 228, 249.

**حماض** HUMMÁD. (See Avicenna, ii. 54. vol. i. p. 270. ed. Lat., vol. i. p. 176. ed. Arab.; Ibn Baitár, vol. i. p. 324.) *Gr.*, Λάπαθον. (See Dioscorides, ii. 140. vol. i. p. 257; Galen, vii. 11. § 4. vol. xii. p. 56.) *Lat.*, Oxalis. (*Rumex obtusifolius*, Forsk.?) *Engl.*, Broad-leaved Dock. 184, 215, 225, 251.

\* Omitted in the Greek Translation.

† Called also Ὀμφάκιον.

‡ Λύκιον ὁ παρὰ τοῖς ἰδωταῖς κροκολύτης λέγεται. *Gloss. MS.*

quoted by Du Cange, *Glossar. Med. et Infim. Graecit.*

¶ See Dr. Royle's paper "On the Lycium of Dioscorides," in the *Trans. of the Linn. Soc.* vol. xvii. p. 83, &c.



حمره HUMRAH. p. 145. Note F.

حمص HIMMAŞ. (See Avicenna, ii. 131. vol. i. p. 291. ed. Lat., vol. i. p. 175. ed. Arab.; Ibn Baïtâr, vol. i. p. 322.) *Gr. Transl.*, Ἐπίβρωθος. (See Dioscorides, ii. 126. vol. i. p. 245; Galen, vi. 5. § 17. vol. xi. p. 876.) *Lat.*, Cicer. (*Cicer arietinum*, Linn.) *Engl.*, Common Chick Pea. 152, 154, 229, 230, 234, 248.

حمل HAMAL. *Lat.*, Agnus, or Aries. (*Ovis Aries*, Linn.) *Engl.*, a lamb, or ram. 54, 248.

حمى المطبقة HUMMAÜ-L-MOTABBAKAH. p. 91.

حنطة HINTAH. (See Avicenna, ii. 249. vol. i. p. 316. ed. Lat., vol. i. p. 176. ed. Arab.; Ibn Baïtâr, vol. i. p. 334.) *Gr. Transl.*, Πυρός. (See Dioscorides, ii. 107. vol. i. p. 233; Galen viii. 16. § 42. vol. xii. p. 111.) *Lat.*, Triticum. (*Triticum vulgare*, Linn.) *Engl.*, Wheat. 130, 235.

خس CHASS. (See Avicenna, ii. 448. vol. i. p. 350. ed. Lat., vol. i. p. 271. ed. Arab.; Ibn Baïtâr, vol. i. p. 365.) *Gr. Transl.*, Ὠρίδακυν. (See Dioscorides, ii. 164. vol. i. p. 279; Galen, vi. 8. § 6. vol. xi. p. 887.) *Lat.*, Lactuca. (*Lactuca sativa*, Linn.) *Engl.*, Lettuce. 62, 66, 72, 78, 146, 232.

خشخاش CHASHCHÁSH. (See Avicenna, ii. 570. vol. i. p. 379. ed. Lat., vol. i. p. 267. ed. Arab.; Ibn Baïtâr, vol. i. p. 367.) *Gr. Transl.*, Κωδεία, and Κωδεία Μήκωνος. (See Dioscorides, iv. 65. vol. i. p. 554. Μήκων; Galen, vii. 12. § 13. vol. xii. p. 72.) *Lat.*, Papaver. (*Papaver somniferum*, Linn.) *Engl.*, Poppy. 62, 162, 184.

خفاف CHUTÁF. (See Avicenna, ii. 355. vol. i. p. 333. ed. Lat., vol. i. p. 273. ed. Arab.; Ibn Baïtâr, vol. i. p. 375.) *Gr.*,\* Χελιδών. (See Dioscorides, ii. 60. vol. i. p. 189; Galen, xi. 1. § 35. vol. xii. p. 359.) *Lat.*, Hirundo. (*Hirundo rustica*, Linn.?) *Engl.*, Swallow. 144.

خطمي CHITMÍ. (See Avicenna, ii. 75. vol. i. p. 276. ed. Lat., vol. i. p. 268. ed. Arab.; Ibn Baïtâr, vol. i. p. 373.) *Gr. Transl.*, Ἀλθαία. (See Dioscorides, iii. 153. vol. i. p. 492; Galen, vi. 5. § 1. vol. xi. p. 867.) *Lat.*, Althaea. (*Althaea officinalis*, Linn.) *Engl.*, Marsh-mallow. 130.

خفاش CHUFFÁSH. (See Avicenna, ii. 739. vol. i. p. 410. ed. Lat., vol. i. p. 272. ed. Arab.; Ibn Baïtâr, vol. i. p. 376.) *Gr. Transl.*, Νυκτερίς. (See Galen, x. 2. § 4. vol. xii. p. 258.) *Lat.*, Vespertilio. (*Vespertilio murinus*, Linn.?) *Engl.*, Bat. 146.

خل CHALL, or حل HALL. [See دهن خل DUHN CHALL.]

خل CHALL. (See Avicenna, ii. 77. vol. i. p. 277. ed. Lat., vol. i. p. 274. ed. Arab.; Ibn Baïtâr, vol. i. p. 377.) *Gr. Transl.*,\* Ὀζος. (See Dioscorides, v. 21. vol. i. p. 706; Galen, viii. 15. § 10. vol. xii. p. 90.) *Lat.*, Acetum *Engl.*, Vinegar. 20, 52, 60, 68, 72, 114, 122, 124, 146, 168, 231, 248.

خلاف CHILÁF. (See Avicenna, ii. 684. vol. i. p. 402. ed. Lat., vol. i. p. 273. ed. Arab.; Ibn Baïtâr, vol. i. p. 381.) *Gr. Transl.*, Κιττός.† *Lat.*, Salix. (*Salix Aegyptiaca*, Forsk.) *Engl.*, Willow. 72, 205, 216, 222, 228, 230, 252, 255.

\* Omitted in the Greek Translation.

† This word, though rendered Κιττός (*Hedera Helix*, Linn.) by the Greek

Translator, signifies quite a different plant, which is perhaps noticed by no Greek author.



الخوزي AL-CHÚZÍ. p. 165. Note (5).

خيار CHÍAR. (See Ibn Baitár, vol. i. p. 400.) *Gr. Transl.*, Τετράγουρον. (See Simeon Seth, *De Aliment. Facult.* p. 126.) *Lat.*, Cucumis. (*Cucumis anguinus*, Linn.) *Engl.*, Serpent Cucumber. 54, 122, 164.

خيش CHAISH. p. 117. Note (7).

دجاج DAJÁJ. (See Avicenna, ii. 295. vol. i. p. 325. ed. *Lat.*, vol. i. p. 158. ed. *Arab.*; Ibn Baitár, vol. i. p. 413.) *Gr.*,\* Ἀλεκτορίς. (See Dioscorides, ii. 53. vol. i. p. 186; Galen, xi. 1. § 38. vol. xii. p. 361.) *Lat.*, Gallina. (*Phasianus Gallus*, Linn.) *Engl.*, Hen. 48.

درّاج DURRÁJ. (See Avicenna, ii. 220. vol. i. p. 309. ed. *Lat.*, vol. i. p. 162. ed. *Arab.*; Ibn Baitár, vol. i. p. 419.) *Gr.*, Ἀττάγην. *Lat.*, Attagen. (*Tetrao francolinus*, Linn.) *Engl.*, Woodcock. 48.

درانی DARÁNÍ. p. 157. Note P.

درّة DURRAH. *Lat.*, Margarita. *Engl.*, Pearl. See p. 42, Note (2).

دم الاخوين DAMU-L-ACHWAIN.† (See Avicenna, ii. 608. vol. i. p. 388. ed. *Lat.*, vol. i. p. 160. ed. *Arab.*; Ibn Baitár, vol. i. p. 426.) *Gr. Transl.*, Δρακόντιον Αἷμα.‡ *Lat.*, Sanguis Draconis. (*Calamus Draco*, Willd.) *Engl.*, Dragon's Blood.¶ 134.

دهن بان DUHN BÂN. (See Ibn

Baitár, vol. i. p. 451.) *Gr.*, Βαλά-νινον ἔλαιον. (See Dioscorides, i. 40. vol. i. p. 50.) *Engl.*, Oil of Ben. 126.

دهن بنفسج DUHN BANAFSAJ. (See Ibn Baitár, vol. i. p. 442.) *Engl.*, Oil of Violets. 225, 250.

دهن حلّ DUHN HALL, or دهن خلّ

DUHN CHALL. (See Ibn Baitár, vol. i. p. 460.) *Gr. Transl.*, Σησαμέλαιον. (See Dioscorides, i. 41. vol. i. p. 50.) *Engl.*, Oil of Sesamum; Teel Oil. 134, 138.

دهن السوسن DUHNU-S-SÚSAN.

(See Ibn Baitár, vol. i. p. 432.) *Gr.*, Σούσινον. (See Dioscorides, i. 62. vol. i. p. 63.) *Engl.*, Oil of Lilies. 229.

دهن الفستق DUHNU-L-FUSTAK.

(See Ibn Baitár, vol. i. p. 451.) *Gr. Transl.*, Πιστακοέλαιον. *Engl.*, Oil of Pistachio. 138, 216.

دهن اللوز DUHNU-L-LAUZ. (See Ibn

Baitár, vol. i. pp. 449, 450.) *Gr.*, Ἀμυγ-δάλινον ἔλαιον. (See Dioscorides, i. 39. vol. i. p. 49; Galen, vi. 5. § 4. vol. xi. p. 871.) *Engl.*, Oil of Almonds. 204.

دهن ورد DUHN WARD. (See Ibn

Baitár, vol. i. p. 440.) *Gr.*,|| Ρόδινον ἔλαιον. (See Dioscorides, i. 53. vol. i. p. 55; Galen, ii. 27. vol. xi. p. 537.) *Engl.*, Attar or Oil of Roses. 124, 249.

دواب DAWÁB. p. 39. Note (4).

\* Omitted in the Greek Translation.

† Called also شیان SHÍÁN. See Ibn Baitár, vol. ii. p. 117.

‡ Perhaps the earliest medical writer who uses the name "Sanguis Draconis" is Aëtius, iv. 3. 12. p. 749A.

¶ Dragon's Blood is procured from the *Calamus Draco*, (a palm,) from the *Pte-*

*rocarpus Draco*, (a leguminous plant,) and perhaps from other plants also. As the *Calamus Draco* is an oriental plant, while the *Pterocarpus Draco* is from the New World, it is probable that the former is the origin of the Dragon's Blood mentioned by Rhazes.

|| Omitted in the Greek Translation.

دينار DÍNĀR. p. 138. Note (\*).

رازيانج RĀZĪĀNAJ. (See Avicenna,

ii. 280. vol. i. p. 321. ed. Lat., vol. i. p. 253. ed. Arab.; Ibn Baitār, vol. i. p. 486.) *Gr. Transl.*, Μάραθρον. (See Dioscorides, iii. 74. vol. i. p. 417; Galen, vii. 12. § 5. vol. xii. p. 67.) *Lat.*, Foeniculum, or Marathrum. (*Foeniculum dulce*, C. Bauhin.) *Engl.*, Sweet Fennel. 98, 100, 102, 205, 214, 219, 223, 251, 253, 254, 255.

رايب RĀIB. *Gr. Transl.*, 'Ράϊπ. *Engl.*, Butter-milk. 56, 60, 186,

رُب RUBB. p. 38. Note (\*).

رَبَن RABN. p. 162. Note (\*).

رُمان RUMMĀN. (See Avicenna, ii. 319. vol. i. p. 328. ed. Lat., vol. i. p. 254. ed. Arab.; Ibn Baitār, vol. i. p. 499.) *Gr. Transl.*, 'Ροιά and 'Ροῖδιον. (See Dioscorides, i. 151. vol. i. p. 142; Galen, viii. 17. § 8. vol. xii. p. 115.) *Lat.*, Malum Punicum, or Granatum. (*Punica Granatum*, Linn.) *Engl.*, Pomegranate. 48, 50, 52, 60, 68, 72, 108, 118, 136, 160, 162, 164, 166, 168, 176, 182, 204, 205, 214, 217, 225, 229, 231, 253.

ريباس RĪBĀS.\* (See Avicenna, ii.

587. vol. i. p. 384. ed. Lat., vol. i. p. 254. ed. Arab.; Ibn Baitār, vol. i. p. 508.) *Lat.*, Ribes. (*Rheum Ribes*, Willd.) *Engl.*, Warty-leaved Rhubarb. 50, 60, 68, 72, 241.

زبد ZUBD. (See Avicenna, ii. 113. vol. i. p. 284. ed. Lat., vol. i. p. 168. ed. Arab.; Ibn Baitār, vol. i. p. 519.) *Gr.*, † Βούτυρον. (See Dioscorides, ii.

81. vol. i. p. 200; Galen, x. 2. § 10. vol. xii. p. 272.) *Lat.*, Butyrum. *Engl.*, Butter. 120, 186, 251.

زبد البحر ZABADU-L-BAHR. (See

Avicenna, ii. 612. vol. i. p. 389. ed. Lat., vol. i. p. 167. ed. Arab.; Ibn Baitār, vol. i. p. 518.) *Gr.*, † Ἀλευόνιον. (See Dioscorides, v. 135. vol. i. p. 802; Galen, xi. 2. § 3. vol. xii. p. 370.) *Lat.*, Alcyonium. (*Alcyonium Ficus*, Pall.?) *Engl.*, Bastard sponge. 144, 148, 150, 152, 229.

زبل ZIBL. (See Avicenna, ii. 613.

vol. i. p. 389. ed. Lat., vol. i. p. 170. ed. Arab.; Ibn Baitār, vol. i. p. 522.) *Gr. Transl.*, Ἀφόδευμα. (See Dioscorides, ii. 98. vol. i. p. 223, Ἀπόπαρος; Galen, x. 2. § 18 sq. vol. xii. p. 290 sq. Κοπρός.) *Lat.*, Stercus. *Engl.*, Dung. 146.

زبيب ZABĪB. (See Avicenna, ii. 730.

735. vol. i. pp. 409, 410. ed. Lat., vol. i. pp. 172, 234. ed. Arab.; Ibn Baitār, vol. i. p. 515.) *Gr. Transl.*, Σταφίς. (See Dioscorides, v. 4. vol. i. p. 689; Galen, *De Aliment. Facult.* ii. 10. vol. vi. p. 581.) *Lat.*, Uva passa, (*Vitis vinifera*, Linn.) *Engl.*, Raisin. 98, 102, 205, 248.

زجاج ZAJĀJ. (See Avicenna, ii. 729. vol. i. p. 409. ed. Lat., vol. i. p. 168. ed. Arab.; Ibn Baitār, vol. i. p. 523.) *Gr.*, Ὕαλος. *Lat.*, Vitrum. *Engl.*, Glass. 146.

زراوند ZIRĀWAND, or زراوند

طویل ZIRĀWAND TAWĪL. (See Avicenna, ii. 50. vol. i. p. 268. ed. Lat., vol. i. p. 171. ed. Arab.; Ibn Baitār, vol. i. p. 525.) *Gr.*, † Ἀριστολογία μακρά.

\* Respecting this plant see Hyde, *De Reliq. Veter. Persar.* p. 540, &c. (ed. 1760.); and Golius, Note to Alfragani, p. 189. It is omitted in the Greek Translation.

† Omitted in the Greek Translation.

‡ Rendered Ἀδάρκης by the Greek

Translator, which substance (spelled also Ἀδαρκος, or Ἀδάρκιον,) is described by Dioscorides, v. 136, vol. i. p. 803, and by Galen, xii. 2. § 2. vol. xii. p. 370. This, however, is probably a mistake; see Note R, p. 157.

¶ Omitted in the Greek Translation.

(See Dioscorides, iii. 4. vol. i. p. 343; Galen, vi. 1. § 56. vol. xi. p. 835.) *Lat.*, *Aristolochia longa*. (*Aristolochia longa*, Linn.) *Engl.*, Birthwort, or Long Birthwort. 152, 156, 229.

**زُرْزُور** ZURZÚR. *Gr. Transl.*, Ψάρος.\*  
(See Dioscorides, ii. 98. vol. i. p. 226; Galen, x. 2. § 29. vol. xii. p. 308.) *Lat.*, *Sturnus*. (*Sturnus vulgaris*, Linn.) *Engl.*, Starling. 146.

**زَعْفَرَان** ZA'FARÁN. (See Avicenna, ii. 129. vol. i. p. 289. ed. *Lat.*, vol. i. p. 169. ed. *Arab.*; Ibn Baïtár, vol. i. p. 530.) *Gr. Transl.*, Κρόκος. (See Dioscorides, i. 25. vol. i. p. 39; Galen, vii. 10. § 57. vol. xii. p. 48.) *Lat.*, *Crocus*. (*Crocus sativus*, Linn.) *Engl.*, Saffron. 102, 110, 118, 215, 222, 225, 229, 235, 243, 247, 248, 251, 254.

**زَنْجَار** ZANJÁR. (See Avicenna, ii. 748. vol. i. p. 412. ed. *Lat.*, vol. i. p. 169. ed. *Arab.*; Ibn Baïtár, vol. i. p. 540.) *Gr. Transl.*, 'Ιάριν.† (See Dioscorides, v. 91. vol. i. p. 754. 'Ιός; Galen, ix. 3. § 10. vol. xii. p. 218.) *Lat.*, *Aerugo aeris*. (*Cupri subacetis*.) *Engl.*, Verdigris. 146, 148.

**زَيْتُون** ZAITÚN. (See Avicenna, ii. 531. vol. i. p. 369. ed. *Lat.*, vol. i. p. 171. ed. *Arab.*; Ibn Baïtár, vol. i. p. 548.) *Gr. Transl.*, 'Ελαια. (See Dioscorides, i. 136, 137. vol. i. p. 131; Galen, vi. 5. § 3. vol. xi. p. 868.) *Lat.*, *Olea*. (*Olea Europaea*, Linn.) *Engl.*, Olive. 146, 220, 254, 256.

**سَحْج** SAHJ. p. 69. Note (3).

**سَذَاب** SADHÁB. (See Avicenna, ii. 578. vol. i. p. 381. ed. *Lat.*, vol. i. p. 224. ed. *Arab.*; Ibn Baïtár, vol. ii. p. 6.) *Gr.*, Πήγανον. (See Dioscorides, iii. 45. vol. i. p. 391; Galen, viii. 16. § 18. vol. xii. p. 100.) *Lat.*, *Ruta*. (*Ruta graveolens*, Linn.) *Engl.*, Rue. 210?

**سَرَطَانُ الْبَاحِرِي** SARATÁNU-L-BAHRÍ. (See Avicenna, ii. 151. vol. i. p. 298. ed. *Lat.*, vol. i. p. 219. ed. *Arab.*; Ibn Baïtár, vol. ii. p. 13.) *Gr. Transl.*, Καρκίνος. *Lat.*, *Cancer marinus*. (*Cancer Pagurus*, Linn.) *Engl.*, Crab. 144.

**سَفَرَجَل** SAFARJAL. (See Avicenna, ii. 155. vol. i. p. 298. ed. *Lat.*, vol. i. p. 228. ed. *Arab.*; Ibn Baïtár, vol. ii. p. 25.) *Gr. Transl.*, Κυδώνιον. (See Dioscorides, i. 160. vol. i. p. 148; Galen, *De Aliment. Facult.* ii. 23. vol. vi. p. 602.) *Lat.*, *Cydonium*. (*Cydonia vulgaris*, Persoon.) *Engl.*, Quince. 60, 122, 184, 254.

**سِكْبَاج** SICBÁJ. p. 37. Note (5).

**سِكْبِيْنَج** SICBÍNAJ. (See Avicenna, ii. 635. vol. i. p. 394. ed. *Lat.*, vol. i. p. 222. ed. *Arab.*; Ibn Baïtár, vol. ii. p. 37.) *Gr. Transl.*, Σκορδολάζαρων.‡ (See Dioscorides, Σαγαπηνόν, iii. 85. vol. i. p. 434; Galen, viii. 18. § 1. vol. xii. p. 117.) *Lat.*, *Sagapenum*. (*Ferulae species?*¶) *Engl.*, *Sagapenum*. 148.

**سُكَّر** SUCCAR. (See Avicenna, ii. 756. vol. i. p. 413. ed. *Lat.*, vol. i. p. 225. ed. *Arab.*; Ibn Baïtár, vol. ii. p. 35.)

\* Printed by mistake ψάρος.

† 'Ιάριν (spelled also ἰάριον), χαλκοῦ ἄνθος. (*MS. Lex.*, quoted by Du Cange, *Glossar. Med. et Infim. Graecit.*)

‡ Σκορδολάζαρων (spelled also σκορδολάσσαρος, σκορδοραζάρι, σκορδοράσarin, &c.) τὸ λεγόμενον Ἰταλικῶς ἀσαφίριδα, i.e. *asa foetida*. (Nicol. Myreps. *De Antid.* i. 27. p. 365 D.;

compare iii. 51. p. 481 A.) See Du Cange, *Glossar. Med. et Infim. Graecit.*

¶ Nothing is known for certain with respect to the plant yielding *Sagapenum*, though it is generally supposed to be the *Ferula Persica*, Willd. See Dr. Royle's *Botany of the Himal. Mount.*, p. 231; Dr. Pereira's *Mater. Med.* p. 1463.

*Gr. Transl.*, Σάκχαρ. (See Dioscorides, Σάκχαρον μέλιτος, ii. 104. vol. i. p. 231; Galen, vii. 12. § 9. vol. xii. p. 71.) *Lat.*, Saccharum. (*Saccharum Officinarum*, Linn.) *Engl.*, Sugar. 50, 58, 68, 72, 120, 122, 146, 148, 160, 168, 176, 178, 204, 229, 251.

سكرجة SUCURJAH. p. 122. Note (3).

سكنجبين SICANJABIN. (See Avicenna, v. 1. 6. vol. ii. p. 296. ed. *Lat.*, vol. ii. p. 211. ed. *Arab.*) *Gr. Transl.*, Ὀξοσάκχαρ. *Engl.*, Oxymel. 68, 70. See Note (4), p. 41.

سماق SUMMÁK. (See Avicenna, ii. 641. vol. i. p. 395. ed. *Lat.*, vol. i. p. 223. ed. *Arab.*; Ibn Baítár, vol. ii. p. 46.) *Gr. Transl.*, Ροῦς Συριακός. (See Dioscorides, i. 147. vol. i. p. 138. Ροῦς; Galen, viii. 17. § 9. vol. xii. p. 115.) *Lat.*, Rhus. (*Rhus coriaria*, Linn.) *Engl.*, Sumach. 60, 66, 72, 108, 118, 124, 205, 224, 228, 230, 243, 247, 249, 256.

سوسم SIMSIM. (See Avicenna, ii. 648. vol. i. p. 396. ed. *Lat.*, vol. i. p. 226. ed. *Arab.*; Ibn Baítár, vol. ii. p. 48.) *Gr. Transl.*, Σήσαμον. (See Dioscorides, ii. 121. vol. i. p. 241; Galen, viii. 18. § 10. vol. xii. p. 120; id. *De Aliment. Facult.* i. 30. vol. vi. p. 547.) *Lat.*, Sesamum. (*Sesamum orientale*, Linn.) *Engl.*, Sesamum. 126, 246.

سمن SAMN. (See Avicenna, ii. 116. vol. i. p. 285. ed. *Lat.*, vol. i. p. 225. ed. *Arab.*; Ibn Baítár, vol. ii. p. 56.) *Gr.*\* Βούτυρον. (See Dioscorides, ii. 81. vol. i. p. 200; Galen, x. 2. § 10. vol. xii. p. 272.) *Lat.*, Butyrum. *Engl.*, Butter. 126.

سندروس SINDARÚS. (See Avicenna, ii. 626. vol. i. p. 393. ed. *Lat.*, vol. i. p. 218. ed. *Arab.*; Ibn Baítár, vol. ii. p. 61.) *Gr. Transl.*, Βερωνίκη.† *Lat.*, Sandaracha. (*Callitris quadrivalvis*, Vent.) *Engl.*, Sandarach,‡ or Juniper Resin. 146.

سواف SAWÁF. p. 52. Note (3).

سوس SÚS. (See Avicenna, ii. 444. vol. i. p. 348. ed. *Lat.*, vol. i. p. ? . ed. *Arab.*; Ibn Baítár, vol. ii. p. 66.) *Gr.*, Γλυκύρριζα. (See Dioscorides, iii. 5. vol. i. p. 346; Galen, vi. 3. § 9. vol. xi. p. 858.) *Lat.*, Glycyrrhiza. (*Glycyrrhiza echinata*, ¶ Linn.) *Engl.*, Liquorice. See p. 57. Note (2), and p. 112. Note (8).

سوسن SÚSAN. (See Avicenna, ii. 443. vol. i. p. 348. ed. *Lat.*, vol. i. p. 220. ed. *Arab.*; Ibn Baítár, vol. ii. p. 68.) *Gr. Transl.*, Ἰρινόφυλλον, and Κρίνον. (See Dioscorides, iii. 106. vol. i. p. 451; Galen, vii. 10. § 55. vol. xii. p. 45.) *Lat.*, Lilium. (*Lilium candidum*, Linn.) *Engl.*, Lily. 132, 229, 232. See p. 57. Note (2).

سويق SAWÍK. *Gr. Transl.*, Ἀλφίτα. 50, 162, 166, 170, 182, 184, 207, 226. See p. 38. Note (4).

شاذنة SHÁDANAH. (See Avicenna, ii. 240. vol. i. p. 313. ed. *Lat.*, vol. i. p. 259. ed. *Arab.*; Ibn Baítár, vol. ii. p. 77.) *Gr. Transl.*, Αἰματίτης. (See Dioscorides, v. 143. vol. i. p. 810; Galen, ix. 2. § 2. vol. xii. p. 195.) *Lat.*, Lapis Haematites. (*Ferrum Haematites*, Linn.) *Engl.*, Haematite, or Red Haematite. 118, 146, 241.

\* Omitted in the Greek Translation.

† Ἡ δὲ τῶν ἰδιώτων γλῶσσα βερωνίκτην λέγει τὸ ἡλεκτρον. (Eustathius, *Comment. ad Iliad. iv.*, quoted by Du Cange, *Glossar. Med. et Infim. Graecit.*) Agapius (*ibid.*) uses the form βερνίκη (whence comes the Italian *vernice*, the French *vernis*, and the English *varnish*), to signify *Sandarach*.

‡ This substance must not be con-

founded with the Σανδαράχη or Σανδαράκη mentioned by Dioscorides, v. 121. vol. i. p. 787, and Galen, ix. 3. § 26. vol. xii. p. 235., which is a mineral production answering to the *Sulphuret of Arsenic*, or *Realgar*.

¶ See Sibthorp, *Prodr. Flor. Graec.* ii. 77; Dr. Pereira's *Mater. Med.* vol. ii. p. 1567.



**شَبَّ** SHABB. (See Avicenna, ii. 70. vol. i. p. 275. ed. Lat., vol. i. p. 258. ed. Arab.; Ibn Baīṭār, vol. ii. p. 83.) *Gr. Transl.*, Στύψις. (See Dioscorides, v. 122. Στυπτηρία,\* vol. i. p. 788; Galen, ix. 3. § 30. vol. xii. p. 236.) *Lat.*, Alumen. (*Potassae Alumino-Sulphas.*) *Engl.*, Alum. 134, 136, 140.

**شَرَاب** SHARÁB. p. 38. Note (3).

**شَعِير** SHA'IR. (See Avicenna, ii. 537. vol. i. p. 371. ed. Lat., vol. i. p. 260. ed. Arab.; Ibn Baīṭār, vol. ii. p. 97.) *Gr.*, Κριθή. (See Dioscorides, ii. 108. vol. i. p. 235; Galen, vii. 10. § 53. vol. xii. p. 44.) *Lat.*, Hordeum. (*Hordeum distichon*, Linn.) *Engl.*, Barley. 160, 162. [See **سَوِيق** SAWÍK, and

**مَاء** MĀ.]

**شَمَع** SHAMA'. (See Ibn Baīṭār, vol. ii. p. 106.†) *Gr.*, Κηρός. (See Dioscorides, ii. 105. vol. i. p. 231; Galen, vii. 10. § 23. vol. xii. p. 25.) *Lat.*, Cera. *Engl.*, Wax. 222, 250.

**شَوْكَرَان** SHÚCRÁN. (See Avicenna, ii. 669. vol. i. p. 399. ed. Lat., vol. i. p. 257. ed. Arab.; Ibn Baīṭār, vol. ii. p. 111.) *Gr. Transl.*, Κώνειον. (See Dioscorides, iv. 79. vol. i. p. 575; Galen, vii. x. § 67. vol. xii. p. 55.) *Lat.*, Cicuta. (*Conium maculatum*, Linn.) *Engl.*, Hemlock. 78.

**شِيَاْف** SHÍÁF. p. 52. Note (1).

**صَابُون** SABÚN. (See Avicenna, ii. 657. vol. i. p. 398. ed. Lat., vol. i. p. 242. ed. Arab.; Ibn Baīṭār, vol. ii. p. 119.) *Gr.*, Σάπων. *Lat.*, Sapo. *Engl.*, Soap. 229.

**صَافِن** SÁFIN, the *Vena saphena*. p. 154. Note M.

**صَبِر** SABIR. (See Avicenna, ii. 66. vol. i. p. 273. ed. Lat., vol. i. p. 242. ed. Arab.; Ibn Baīṭār, vol. ii. p. 120.) *Gr. Transl.*, Ἀλόη. (See Dioscorides, iii. 22. vol. i. p. 364; Galen, vi. 1. § 23. vol. xi. p. 821.) *Lat.*, Aloë. (*Aloë Arabica*, Lam.?) *Engl.*, Aloe. 110, 134, 243.

**صَدَاع** SUDÁ'. p. 104. Note (4)

**صَفْرَاء** SAFRÁ. *Engl.*, Yellow bile. See Note (1), p. 39.

**صَمَغ الْعَرَبِي** SAMAG, or **صَمَغ** SAMAGU-L-'ARABÍ. (See Avicenna, ii. 316. vol. i. p. 328. ed. Lat., vol. i. p. 242. ed. Arab.; Ibn Baīṭār, vol. ii. p. 133.) *Gr. Transl.*, Κόμμι Ἀραβικόν. (See Dioscorides, i. 133. vol. i. p. 127. Ἀκακία; Galen, vii. 10. § 40. vol. xii. p. 34. Κόμμι.) *Lat.*, Gummi Arabicum. (*Acacia vera*, Willd., and also other species of Acacia.) *Engl.*, Gum Arabic. 122, 150, 164, 182, 184, 186, 207, 247.

**صَمَغ الزَيْتُون** SAMAGU-Z-ZAITÚN. (See Ibn Baīṭār, vol. ii. p. 135.) *Gr. Transl.*, Κομίδη Ἐλαίου. (See Dioscorides, i. 141. vol. i. p. 135. Δάκρυον Ἐλαίας Αἰθιοπικῆς.) *Engl.*, Olive Gum. 146.

**صَمَغ اللُّوز** SAMAGU-L-LAUZ. (See Ibn Baīṭār, vol. ii. p. 134.) *Gr. Transl.*, Ἀμυγδαλέλαιον. (See Dioscorides, i. 176. vol. i. p. 154.) *Engl.*, Almond Gum. 146.

**صَنْدَل أَبْيَض** SANDAL ABYAD. (See Avicenna, ii. 656. vol. i. p. 398. ed. Lat., vol. i. p. 241. ed. Arab.; Ibn Baīṭār, vol. ii. p. 138.) *Gr. Transl.*, Σάνταλον λευκόν.† *Lat.*, Sandalum album. (*Santalum album*, Linn.) *Engl.*, White Sanders. 58, 66, 70, 122, 132, 206, 215, 222, 230, 240.

\* On the doubt which exists as to the nature of this substance, see Beckmann's *Hist. of Inventions*, vol. i. p. 180; Dr. Pereira's *Mater. Med.* vol. i. p. 613.

† Described by Avicenna under the

name **مُوم** MÚM, ii. 694, vol. i. p. 356.

ed. Lat., vol. i. p. 208. ed. Arab.

‡ Aëtius is probably the earliest Greek medical writer who mentions the word



ضَب DAB. (See Avicenna, ii. 225. vol. i. p. 310. ed. Lat., vol. i. p. 277. ed. Arab.) Gr.,\* Κροκόδειλος. (See Dioscorides, ii. 98. vol. i. p. 226; Galen, x. 2. § 29. vol. xii. p. 307.) Lat., Crocodilus. (*Crocodilus vulgaris*, Linn.) Engl., Crocodile. 146.

طَبَاشِير TABÁSHÍR. (See Avicenna, ii. 616. vol. i. p. 391. ed. Lat., vol. i. p. 182. ed. Arab.; Ibn Baitár, vol. ii. p. 149.) Gr. Transl., Σπόδιον.† Lat., Tebashir. (*Bambusa arundinacea*, Schreb.) Engl., Tabasheer. 62, 66, 70, 72, 164, 182, 184, 204, 206, 207, 254.

طَبَرَزَد TABARZAD. Engl., White Sugar Candy. 68, 120, 122, 148, 160, 176, 229, 254. See p. 42. Note (1).

طَبِيعَة TABÍ'AH. p. 91. Note (3).

طَرَحُون TARCHÚN. (See Avicenna, ii. 689. vol. i. p. 402. ed. Lat., vol. i. p. 182. ed. Arab.; Ibn Baitár, vol. ii. p. 156.) Gr. Transl., Ταρχός. Lat., Dracunculus. (*Artemisia Dracunculus*, Linn.) Engl., Tarragon. 72.

طَرَفَا TARFÁ. (See Avicenna, ii. 691. vol. i. p. 402. ed. Lat., vol. i. p. 182. ed. Arab.; Ibn Baitár, vol. ii. p. 153.) Gr. Transl., Γλήχων.‡ (See Dioscorides, i. 116. vol. i. p. 113. Μυρίκη; Galen, vii. 12. § 28. vol. xii. p. 80.) Lat., Tamariscus. (*Tamarix Gallica*, Linn.) Engl., Tamarisk. 132, 206, 215, 222, 225, 230, 245, 246, 250, 257.

طِين الْأَرْمَنِ TÍN-U-L-ARMENÍ. (See Avicenna, ii. 420. vol. i. p. 341. ed. Lat., vol. i. p. 184. ed. Arab.; Ibn Baitár, vol. ii. p. 174.) Gr. Transl., Βώλος Ἀρμενιακός. (See Galen, ix.

1. § 4. vol. xii. p. 189.) Lat., Bolus Armena. (*Argilla Bolus rubra*, Linn.) Engl., Armenian Bole. 122, 207, 218.

طِين خُوزِي TÍN CHÚZÍ.¶ Lat., Bolus Susiana. Engl., Susian Bole. See Note Q. p. 157.

طِين مَاحْتُم TÍN MACHTÚM. (See Avicenna, ii. 418. vol. i. p. 341. ed. Lat., vol. i. p. 183. ed. Arab.; Ibn Baitár, vol. ii. p. 166.) Gr. Transl., Βώλος. (See Dioscorides, v. 113. vol. i. p. 778. Δημνία γῆ; Galen, ix. 1. § 2. vol. xii. p. 169.) Lat., Terra Lemnia, or Terra Sigillata. (*Argilla Bolus flava*, Linn.) Engl., Lemnian Earth. 184.

الْعَبَادِي AL-'IBÁDÍ. p. 167. Note (1).

عَجْجُول 'IJJAUL. Gr.,|| Μόσχος. Lat., Vitulus. (*Bos Taurus*, Linn.) Engl., Calf. 48.

عَدَس 'ADAS. (See Avicenna, ii. 445. vol. i. p. 349. ed. Lat., vol. i. p. 232. ed. Arab.; Ibn Baitár, vol. ii. p. 184.) Gr. Transl., Φάκη. (See Dioscorides, ii. 129. vol. i. p. 249; Galen, viii. 21. § 1. vol. xii. p. 149.) Lat., Lens. (*Ervum Lens*, Linn.) Engl., Lentile. 52, 62, 66, 72, 102, 168, 170, 204, 205, 215, 217, 222, 223, 225, 226, 228, 246, 248, 256, 257.

عَدَسِيَّة 'ADASÍYAH. p. 37. Note (3).

عَسَل 'ASAL. (See Avicenna, ii. 496. vol. i. p. 360. ed. Lat., vol. i. p. 233. ed. Arab.; Ibn Baitár, vol. ii. p. 190.) Gr. Transl., Μέλι. (See Dioscorides, ii. 101. vol. i. p. 229; Galen, vii. 12. § 9. vol. xii. p. 70; id. *De Meth. Med.* vii. 6. vol. x. p. 475.) Lat., Mel. Engl., Honey. 30, 54, 178.

Σάνταλον, which is also written Σάνδαλον, and Σάνδανον. See Salmasius, *Plinian. Exercit.* p. 726.

\* Omitted in the Greek Translation.

† On the improper use of the word Σπόδιον, *Spodium*, see Salmasius, *Plinian. Exercit.* p. 719; id. *De Saccharo*, p. 255.

‡ Γλήχων, *Pulegium*, (*Mentha Pulegium*, Linn.) is described by Dioscorides, iii. 30. vol. i. p. 377; by Galen, vi. 3. § 7. vol. xi. p. 857.

¶ Omitted by the Greek Translator.

|| Omitted by the Greek Translator.

عصفور 'UṢFÚR. (See Ibn Baīṭár, vol. ii. p. 196.) *Gr. Transl.*, Στρούθιον. *Lat.*, Passer. (*Pyrgita domestica*, Cuv.) *Engl.*, Sparrow. 144.

عصيدة 'ASÍDAH. p. 32. Note (3).

عظام 'IDHÁM. (See Avicenna, ii. 535. vol. i. p. 371. ed. *Lat.*, vol. i. p. 234. ed. Arab.; Ibn Baīṭár, vol. ii. p. 198.) *Gr. Transl.*, 'Οστέα. (See Galen, xi. 1. § 18, vol. xii. p. 342.) *Lat.*, Ossa. *Engl.*, Bones. 122, 152, 228, 229, 230.

عقصة 'AFṢAH, or عقص 'AFṢ. (See Avicenna, ii. 314. vol. i. p. 327. ed. *Lat.*, vol. i. p. 231. ed. Arab.; Ibn Baīṭár, vol. ii. p. 199.) *Gr. Transl.*, Κηκίδιον. (See Dioscorides, i. 146. vol. i. p. 137; Galen, vii. 10. § 22. vol. xii. p. 24.) *Lat.*, Gallae. (*Quercus infectoria*, Linn.) *Engl.*, Galls. 108.

عئاب 'UNNÁB. (See Avicenna, ii. 368. vol. i. p. 336. ed. *Lat.*, vol. i. p. 231. ed. Arab.; Ibn Baīṭár, vol. ii. p. 220.) *Gr. Transl.*, Ζίζυφον. *Lat.*, Zizypha, or Jujuba. (*Zizyphus vulgaris*. De Cand.) *Engl.*, Jujube. 60, 72, 214.

عنب 'INAB. (See Avicenna, ii. 735. vol. i. p. 410. ed. *Lat.*, vol. i. p. 234. ed. Arab.; Ibn Baīṭár, vol. ii. p. 221.) *Gr. Transl.*, Σταφυλή. (See Dioscorides, v. 3. vol. i. p. 688; Galen, *De Aliment. Facult.* ii. 9. vol. vi. p. 573.) *Lat.*, Uva. (*Vitis vinifera*, Linn.) *Engl.*, Grapes. 30, 58.

عنب الثعلب 'INABU-TH-THA'-LAB. (See Avicenna, ii. 653. vol. i. p. 397. ed. *Lat.*, vol. i. p. 230. ed. Arab.; Ibn Baīṭár, vol. ii. p. 212.) *Gr. Transl.*, Στρούχνον. (See Dioscorides, iv. 71. vol. i. p. 565; Galen, viii. 19. § 15. vol. xii. p. 145. Τρούχνον.) *Lat.*,

Solanum. (*Solanum nigrum*, Linn.) *Engl.*, Black Nightshade. 62, 78.

انزروت 'ANZARÚT, or عنزروت

ANZARÚT. (See Avicenna, ii. 598. vol. i. p. 386. ed. *Lat.*, vol. i. p. 127. ed. Arab.; Ibn Baīṭár, vol. i. p. 92.) *Gr. Transl.*, Κροκοῦτης, Στακοκόλλητον.\* (See Dioscorides, iii. 89. vol. i. p. 440, Στακοκόλλα; Galen, viii. 18. § 4. vol. xii. p. 118.) *Lat.*, Sarcocolla.† *Engl.*, Sarcocol. 134, 148, 152, 229.

غشي GASHY. p. 72. Note (2).

فار FÁR. (See Avicenna, ii. 497. vol. i. p. 361. ed. *Lat.*, vol. i. p. 240. ed. Arab.; Ibn Baīṭár, vol. ii. p. 241.) *Gr. Transl.*, Μῦς. (See Dioscorides, ii. 98. vol. i. p. 225; Galen, x. 2. § 28. vol. xii. p. 307.) *Lat.*, Mus. (*Mus agrestis*, Linn.?) *Engl.*, Mouse. 146.

فالوزج FÁLÚZAJ. p. 32. Note (4).

فجل FUJL. (See Avicenna, ii. 581. vol. i. p. 382. ed. *Lat.*, vol. i. p. 239. ed. Arab.; Ibn Baīṭár, vol. ii. p. 246.) *Gr. Transl.*, 'Ραφανίς. (See Dioscorides, ii. 137. vol. i. p. 256; Galen, viii. 17. § 2. vol. xii. p. 111.) *Lat.*, Raphanus. (*Raphanus sativus*, Linn.) *Engl.*, Radish. 152, 156, 228.

فستق FUSTAK. (See Avicenna, ii. 275. vol. i. p. 320. ed. *Lat.*, vol. i. p. 240. ed. Arab.; Ibn Baīṭár, vol. ii. p. 255.) *Gr. Transl.*, Πιστακόλαιον (See Dioscorides, Πιστάκια, i. 177. vol. i. p. 156; Galen, viii. 16. § 21. vol. xii. p. 102.) *Lat.*, Pistacia. (*Pistacia vera*, Linn.) *Engl.*, Pistachio. 138, 216.

فقوص FAKKÚṢ. (See Ibn Baīṭár,

\* The Translator has not found this word (which is evidently a corruption of σαρκοκόλλα, or connected with it,) noticed in any lexicon.

† The Translator has not ventured to assign any name to the plant yielding

Persian Sarcocol. The genus *Penaea* has been said to produce it, but the accuracy of this assertion is doubtful. See Salmasius, *De Homon. Hyles Iatr.* c. 106. p. 175; Sprengel, *Comment. in Dioscor.* vol. ii. p. 533.

- vol. ii. p. 260.)\* *Lat.*, Citrullus. (*Cucurbita Citrullus*, Linn.) *Engl.*, Water Melon. 54.
- فلفل FULFUL. (See Avicenna, ii. 556. vol. i. p. 376. ed. *Lat.*, vol. i. p. 236. ed. *Arab.*; Ibn Baïtâr, vol. ii. p. 261.) *Gr. Transl.*, Πέπερι. (See Dioscorides, ii. 188. vol. i. p. 298; Galen, viii. 16. § 11. vol. xii. p. 97.) *Lat.*, Piper. (*Piper longum*, Linn.) *Engl.*, Pepper. 156.
- فنداديقون FENDADÍKÚN, the *Pentadicon*. p. 165. Note (1).
- فواكه FAWÁCIH. p. 42. Note (2).
- قاطا جانس KÁTÁJÁNIS, i. e. *κατὰ γένος*. p. 141. Note D.
- قاقيا KÁKÍÁ. [See اقاويا ÁKÁKÍÁ.]
- قثاء KITHTHÁ. (See Avicenna, ii. 179. vol. i. p. 303. ed. *Lat.*, vol. i. p. 249. ed. *Arab.*; Ibn Baïtâr, vol. ii. p. 276.)† *Lat.*, Cucumis. (*Cucumis sativus*, Linn.) *Engl.*, Cucumber. 54.
- قرع KAR'. (See Avicenna, ii. 178. vol. i. p. 303. ed. *Lat.*, vol. i. p. 249. ed. *Arab.*; Ibn Baïtâr, vol. ii. p. 284.) *Gr. Transl.*, Κολόκυνθα. (See Dioscorides, ii. 161. vol. i. p. 277; Galen, vii. 10. § 37. vol. xii. p. 33; id. *De Aliment. Facult.* ii. 3. vol. vi. p. 561.) *Lat.*, Cucurbita. (*Cucurbita Pepo*, Linn.) *Engl.*, Gourd. 54, 122, 164.
- قسط KUST, or قسط حلو KUST HULW. (See Avicenna, ii. 164. vol. i. p. 301. ed. *Lat.*, vol. i. p. 245. ed. *Arab.*;
- Ibn Baïtâr, vol. ii. p. 297.) *Gr. Transl.*, Κοσπόριζον. (See Dioscorides, i. 15. vol. i. p. 29; Galen, vii. 10. § 45. vol. xii. p. 40.) *Lat.*, Costus. (*Aucklandia Costus*, Fal.†) *Engl.*, Costus, or Putchuk. 152 (?), 156, 229, 235.
- قصب KASAB. (See Avicenna, ii. 67. vol. i. p. 274. ed. *Lat.*, vol. i. p. 244. ed. *Arab.*; Ibn Baïtâr, vol. ii. p. 302.) *Gr. Transl.*, Κάλαμος. (See Dioscorides, i. 114. vol. i. p. 111; Galen, vii. 10. § 3. vol. xii. p. 7.) *Lat.*, Arundo. (*Arundo donax*, Linn.) *Engl.*, Reed. 152, 154, 216, 228, 229, 235, 252, 255, 257.
- قطن KUTN. (See Avicenna, ii. 390. vol. i. p. 338. ed. *Lat.*, vol. i. p. 248. ed. *Arab.*; Ibn Baïtâr, vol. ii. p. 305.) *Gr. Transl.*, Βαμβάκιον. *Lat.*, Gossypium. (*Gossypium herbaceum*, Linn.) *Engl.*, Cotton. 124, 138, 206.
- قطونا KUTÚNÁ. (See Avicenna, ii. 540. vol. i. p. 372. ed. *Lat.*, vol. i. p. 142. ed. *Arab.*; Ibn Baïtâr, vol. i. p. 132.) *Gr. Transl.*, Ψύλλιον. (See Dioscorides, iv. 70. vol. i. p. 563; Galen, viii. 23. § 2. vol. xii. p. 158.) *Lat.*, Psyllium. (*Plantago Psyllium*, Linn.) *Engl.*, Flea-wort. 62, 70, 120, 122, 164, 225, 251.
- قيفال KÍFÁL, the *cephalic vein*. p. 152. Note L.
- كافور CÁFUR. (See Avicenna, ii. 133. vol. i. p. 291. ed. *Lat.*, vol. i. p. 189. ed. *Arab.*; Ibn Baïtâr, vol. ii. p. 333.) *Gr.*, ¶ Κάφουρα. (See Simeon Seth, *De Aliment. Facult.* p. 59.) *Lat.*, Camphora. (*Camphora officinarum*, Nees.) *Engl.*, Common, or Laurel Camphor. || 58, 62, 66, 70, 72, 122, 124, 204, 215, 224, 230, 231.

\* Omitted in the Greek Translation.  
 † Omitted in the Greek Translation.  
 ‡ See a paper by Dr. Falconer, entitled "Some Account of *Aucklandia*, a new genus of *Compositae*," &c. in the *Trans. of the Linn. Soc.* vol. xix. p. 23; and an

anonymous notice by Dr. Pereira, "On *Aucklandia Costus*," in the *Pharmac. Journ.* vol. iii. p. 40, 1.

¶ Omitted in the Greek Translation.  
 || See Salmasius, *De Homon. Hyles Iatr.* c. 110. p. 182.

**كثيرا** CATHIRÁ. (See Avicenna, ii. 223. vol. i. p. 310. ed. Lat., vol. i. p. 191. ed. Arab.; Ibn Baīṭār, vol. ii. p. 350.) *Gr. Transl.*, Τραγάκανθα. (See Dioscorides, iii. 20. vol. i. p. 362; Galen, viii. 19. § 8. vol. xii. p. 143.) *Lat.*, Gummi Tragacantha. (*Astragalus verus*, Linn., and other species.) *Engl.*, Gum Tragacanth. 102, 217, 222, 223, 225, 235, 248, 249.

**كحل** CUHL. (See Ibn Baīṭār, vol. ii. p. 351.) *Gr. Transl.*, Κόχλος. *Lat.*, Stibium, or Antimonium. (*Antimonii Sesquisulphuretum*.) *Engl.*, Cuhl, or Sesquisulphuret of Antimony. 134, 184, 205, 214, 217, 219, 228, 231, 241, 249, 251, 258. See p. 154. Note O.

**كرفس** CARAFS. (See Avicenna, ii. 56. vol. i. p. 270. ed. Lat., vol. i. p. 195. ed. Arab.; Ibn Baīṭār, vol. ii. p. 352.) *Gr. Transl.*, Σέλινον. (See Dioscorides, iii. 67. vol. i. p. 411; Galen, viii, 18. § 6. vol. xii. p. 118.) *Lat.*, Apium. (*Apium graveolens*, Linn.) *Engl.*, Smallage. 98, 100, 102, 214, 219, 251, 253, 255.

**كرم** CARM. (See Avicenna, ii. 732. vol. i. p. 409. ed. Lat., vol. i. p. 198. ed. Arab.; Ibn Baīṭār, vol. ii. p. 356.) *Gr.*, Ἀμπελογ. (See Dioscorides, v. 1. vol. i. p. 686; Galen, vi. 1. § 33. vol. xi. p. 826.) *Lat.*, Vitis. (*Vitis vinifera*, Linn.) *Engl.*, Vine. 222, 225, 250, 257.

**كرب** CARAMB. (See Avicenna, ii. 142. vol. i. p. 294. ed. Lat., vol. i. p. 196. ed. Arab.; Ibn Baīṭār, vol. ii. p. 358.) *Gr.*,\* Κράμβη. (See Dioscorides, ii. 146. vol. i. p. 262; Galen, vii. x. § 48. vol. xii. p. 42.) *Lat.*, Brassica. (*Brassica oleracea*, Linn.) *Engl.*, Cabbage. 62.

**كزبرة** CUZBURAH, OR **كسبرة** CUS-

BURAH, OR **كزيرة** CUZIRAH. (See Avicenna, ii. 143. vol. i. p. 294. ed. Lat., vol. i. p. 197. ed. Arab.; Ibn Baīṭār, vol. ii. p. 372.) *Gr. Transl.*, Κορίαννον. (See Dioscorides, iii. 64. vol. i. p. 410; Galen, vii. 10. § 43. vol. xii. p. 36.) *Lat.*, Coriandrum. (*Coriandrum sativum*, Linn.) *Engl.*, Coriander. 62, 205, 214, 217, 224, 231, 249.

**كزمازك** CIZMÁZAK. (See Avicenna, ii. 372. vol. i. p. 337. ed. Lat., vol. i. p. 191. ed. Arab.; Ibn Baīṭār, vol. ii. p. 378.) The galls found on the **اثل** ATHL.† 136.

**الكموني** AL-CUMÚNÍ, the *electuarium diacyminum*. p. 165. Note (e).

**كندر** CUNDUR. (See Avicenna, ii. 532. vol. i. p. 370. ed. Lat., vol. i. p. 189. ed. Arab.; Ibn Baīṭār, vol. ii. p. 397.) *Gr. Transl.*, Λιβανον.† (See Dioscorides, i. 81. vol. i. p. 85; Galen, vii. 11. § 13. vol. xii. p. 60.) *Lat.*, Thus. (*Boswellia thurifera*, Colebr.¶) *Engl.*, Olibanum, or Frankincense. 134, 229.

**لبن** LABAN. (See Avicenna, ii. 441. vol. i. p. 346. ed. Lat., vol. i. p. 202. ed. Arab.; Ibn Baīṭār, vol. ii. p. 413.) *Gr. Transl.*, Γάλα. (See Dioscorides, ii. 75. vol. i. p. 195; Galen, x. 2. § 7. vol. xii. p. 263; id. *De Aliment. Facult.* iii. 15. vol. vi. p. 681.) *Lat.*, Lac. *Engl.*, Milk. 24, 30, 54, 126, 146, 178, 245, 247.

**لعوق** LA'ÚK. p. 53. Note (3).

**لقاح** LAKÁH. *Engl.*, a female Camel. [See **جمل** JAML.]

**لك** LAC. (See Avicenna, ii. 431. vol. i. p. 344. ed. Lat., vol. i. p. 199. ed. Arab.; Ibn Baīṭār, vol. ii. p. 440.)

\* Omitted in the Greek Translation.

† Omitted in the Greek Translation.

‡ Called also Λιβανωτός.

¶ African olibanum is produced by *Plösslea* [Boswellia?] *floribunda*. See Dr. Royle, *Pharmac. Journ.* vol. v. p. 541.



*Gr. Transl.*, Λαχῶν.\* *Lat.*, Gummi Laccae. (Formed by the *Coccus Lacca* on the *Aleurites laccifera*, Willd., *Ficus Indica*, Linn., and other trees.) *Engl.*, Lac. 102, 205, 222, 223, 225, 228, 235, 246, 248, 257.

لها LAHMÁ. p. 125. Note (6).

لوبياء LÚBÍÁ. (See Avicenna, ii. 252. vol. i. p. 317. ed. Lat., vol. i. p. 201. ed. Arab.; Ibn Baīṭár, vol. ii. p. 444.) *Gr. Transl.*, Φάσουλος.† (See Dioscorides, Σμίλαξ, ii. 175. vol. i. p. 285.) *Lat.*, Phaseolus. (*Phaseolus vulgaris*, Linn.) *Engl.*, Kidney-bean. 152.

لوز حلو LAUZ HULW, and لوز مرّ

LAUZ MURR. (See Avicenna, ii. 58. vol. i. p. 271. ed. Lat., vol. i. p. 201. ed. Arab.; Ibn Baīṭár, vol. ii. p. 442.) *Gr. Transl.*, Ἀμύγδαλον. (See Dioscorides, i. 176. vol. i. p. 154; Galen, vi. 1. § 36. vol. xi. p. 827.) *Lat.*, Amygdala dulcis, and Amygdala amara. (*Amygdalus communis*, Linn.) *Engl.*, Sweet Almond, and Bitter Almond. 120, 122, 146, 152, 156, 229, 230, 235.

ماء الجبن MÁÜ-L-JUBN. (See Ibn Baīṭár, vol. ii. p. 475.) *Gr. Transl.*, Ὀρός γάλακτος. (See Dioscorides, ii. 76. vol. i. p. 197; Galen, x. 2. § 8. vol. xii. p. 266.) *Engl.*, Whey. 58.

ماء الخيار MÁÜ-L-CHÍÁR. (See Ibn Baīṭár, vol. ii. p. 483.) *Gr. Transl.*, Χυλὸς Τετραγγοῦρου. *Engl.*, Juice of Serpent Cucumber. 164.

ماء الشعير MÁÜ-SH-SHA'IR. (See Ibn Baīṭár, vol. ii. p. 478.) *Gr. Transl.*, Χυλός. (See Dioscorides, ii. 108. vol. i. p. 235. Κριθή.) *Engl.*, Barley-water. 50, 152, 154, 160, 162, 164, 182, 184, 204, 214, 229, 230, 234, 257.

ماء الكافور MÁÜ-L-CÁFÚR. (See Ibn Baīṭár, vol. ii. p. 482.)† *Engl.*, Camphor-water. 58, 214.

ماء الورد MÁÜ-L-WARD. (See Ibn Baīṭár, vol. ii. p. 482.) *Gr. Transl.*, Ῥόδσταγμα, and Ῥοδοστάλαγμα. *Engl.*, Rose-water. 68, 106, 108, 116, 122, 205, 224, 225, 228, 230, 231, 243, 246, 247.

ماش MÁSH. (See Avicenna, ii. 488. vol. i. p. 359. ed. Lat., vol. i. p. 212. ed. Arab.; Ibn Baīṭár, vol. ii. p. 465.) *Gr.*, Πισσόν? (See Galen, *De Aliment. Facult.* i. 21. vol. vi. p. 532?) *Lat.*, Pisum? (*Phaseolus Mungo*, Linn.) *Engl.*, Indian Pea. 225, 228, 257.

ماميثا MÁMÍTHÁ. (See Avicenna, ii. 477. vol. i. p. 358. ed. Lat., vol. i. p. 210. ed. Arab.; Ibn Baīṭár, vol. ii. p. 462.) *Gr. Transl.*, Γλαύκιον. (See Dioscorides, iii. 90. vol. i. p. 441; Galen, vi. 3. § 5. vol. xi. p. 857.) *Lat.*, Glaucium. (*Glaucium Phoeniceum*, Crantz.) *Engl.*, Red Horn Poppy. 110, 122, 124, 215, 243.

ماميران MÁMÍRÁN.¶ (See Avicenna, ii. 486. vol. i. p. 359. ed. Lat., vol. i. p. 211. ed. Arab.; Ibn Baīṭár, vol. ii. p. 487.) *Gr. Transl.*, Μαμηρά.¶ (See

\* Ibn Baīṭár says that some persons thought (but incorrectly,) that this substance was the same that is described under the name Κάγκαμον by Dioscorides, i. 23. vol. i. p. 38; Galen, vii. 10. § 4. vol. xii. p. 8.

† Φάσουλος another form of the word φασίολος, which is spelled also in various other ways. See Du Cange, *Glossar. Med. et Infim. Graecit.*

‡ Omitted in the Greek Translation.

¶ Called also عروق 'URUK, under

which name it is noticed by Ibn Baīṭár, vol. ii. p. 186.

¶ Perhaps Paulus Aegineta is the earliest Greek medical writer who uses this word (iii. 22. p. 35. l. 20; vii. 3. p. 113. l. 25.), which is also written μαμηρά, μαμηρέ, μαμηράς, &c. A MS. Greek Lexicon quoted by Du Cange (*Glossar. Med. et Infim. Graecit.*) explains it to be Χελιδόνιον τὸ μικρόν, others have supposed it to be the *Doronicum* of the Latins. See Salmasius, *De Homon. Hyles Iatr.* c. 54. p. 64.



Dioscorides, ii. 211. *Χελιδόνιον μέγα*, vol. i. p. 330; Galen, viii. 22. § 9. vol. xii. p. 156.) *Lat.*, *Chelidonium Majus*. (*Chelidonium majus*, Linn.) *Engl.*, Greater Celandine. 146, 150.

مثقال MITHKÁL. p. 115. Note (1).

م MURR. (See Avicenna, ii. 475. vol. i. p. 357. ed. *Lat.*, vol. i. p. 209. ed. Arab.; Ibn Baïtár, vol. ii. p. 496.) *Gr. Transl.*, *Σμύrna*. (See Dioscorides, i. 77. vol. i. p. 78; Galen, viii. 22. § 30. vol. xii. p. 127.) *Lat.*, Myrrha. (*Balsamodendron Myrrha*, Ehrenb.) *Engl.*, Myrrh. 146.

مرتكى MURTAC.\* *Gr. Transl.*, *Λιθ-ἀργυρος*. *Lat.*, Lithargyrum. (*Plumbi Oxydum*.) *Engl.*, Litharge. 152, 237.

مرداسنج MARDÁSANJ. (See Avicenna, ii. 467. vol. i. p. 355. ed. *Lat.*, vol. i. p. 207. ed. Arab.; Ibn Baïtár, vol. ii. p. 505.) *Gr. Transl.*, *Λιθἀργυρος*. (See Dioscorides, v. 102. vol. i. p. 765; Galen, ix. 3. § 17. vol. xii. p. 224.) *Lat.*, Lithargyrum. (*Plumbi Oxydum*.) *Engl.*, Litharge. 152, 216, 229, 230, 234, 252, 255.

مري MURÍ. (See Avicenna, ii. 493. vol. i. p. 360. ed. *Lat.*, vol. i. p. 213. ed. Arab.; Ibn Baïtár, vol. ii. p. 504.) *Gr. Transl.*, *Γάρον*, or *Γάρος*. (See Dioscorides, ii. 34. vol. i. p. 181; Galen, xi. 2. § 12. vol. xii. p. 377.) *Lat.*, *Garum*. *Engl.*, Caviare. 112, 210, 214, 217, 231, 254.

مساحقونيا MASAHKÚNÍÁ, or

مساحوقنيا MASHÚKNÍÁ. *Engl.*, Scoriae of Glass. 144, 148, 150. See 158. Note S.

\* Another name for the following article.

† Probably the earliest Greek medical writer who notices musk is Aëtius (iv. 4. 113, 122. pp. 837, 840.); and the earliest Greek author who describes the animal, Cosmas, commonly called *Indicopleustes*

مسكى Misc. (See Avicenna, ii. 460. vol. i. p. 354. ed. *Lat.*, vol. i. p. 204. ed. Arab.; Ibn Baïtár, vol. ii. p. 513.) *Gr. Transl.*, *Μόσχος*. (See Simeon Seth, *De Aliment. Facult.* p. 70.)† *Lat.*, Moschus. (*Moschus moschiferus*, Linn.) *Engl.*, Musk. 146, 246, 258.

مصوص MASÚS. p. 38. Note (2).

ملح MILH. (See Avicenna, ii. 623. vol. i. p. 392. ed. *Lat.*, vol. i. p. 212. ed. Arab., Ibn Baïtár, vol. ii. p. 527.) *Gr. Transl.*, *ἄλας*. (See Dioscorides, v. 125. vol. i. p. 792; Galen, xi. 2. § 5. vol. xii. p. 372.) *Lat.*, *Sal*. (*Muria marina*, Linn.) *Engl.*, Common Salt. 140, 205, 215, 230, 251.

ملح اندراني MILH ANDARÁNÍ. *Gr. Transl.*, *ἄλας γάγγραινον*.† *Lat.*, *Sal Andarenus*. *Engl.*, Andarenian Salt. 134, 136, 142, 246? See p. 157. Note P.

ملح عاجين MILH 'AJÍN. p. 122. Note (6).

ملوخية MULÚCHÍAH, and ملوخيا MULÚCHÍÁ. (See Avicenna, ii. 490. vol. i. p. 359. ed. *Lat.*, vol. i. p. 212. ed. Arab.; Ibn Baïtár, vol. ii. p. 532.) *Gr. Transl.*, *Μαλάχη*. (See Dioscorides, ii. 144. vol. i. p. 260; Galen, vii. 12. § 3. vol. xii. p. 66.) *Lat.*, *Malva*. (*Corchorus olitorius*, Forsk.) *Engl.*, Jew's Mallow. 54.

منجى MUNJÍH. p. 107. Note (2).

موم MÚM. (See Avicenna, ii. 694. vol. i. p. 356. ed. *Lat.*, vol. i. p. 208.

(*Topograph. Christ.* lib. xi. p. 355. in vol. ii. of Montfaucon's *Collectio Nova*, &c.).

‡ *ἄλας γάγγραινον* (spelled also *γαγγρινόν*, or *γαγγρινόν*), is explained in a MS. Lexicon quoted by Du Cange (*Glossar. Med. et Infim. Graecit.*) to mean *ἄλας ὀρυκτόν*, or fossil salt.

ed. Arab.)\* *Gr.*, Κηρός. (See Dioscorides, ii. 105. vol. i. p. 231; Galen, vii. 10. § 23. vol. xii. p. 25.) *Lat.*, Cera. *Engl.*, Wax. 225.

ميل MÍL. p. 155.

نخالة NUCHA'LAH. (See Avicenna, ii. 257. vol. i. p. 318. ed. Lat., vol. i. p. 215. ed. Arab.; Ibn Baïtár, vol. ii. p. 551.) *Gr. Transl.*, Πύρρον. (See Dioscorides, ii. 107. vol. i. p. 234.) *Lat.*, Furfur. *Engl.*, Bran. 130, 154.

نرول الماء NAZÚLU-L-MÁ. p. 139.  
Note (1).

نشأ NASHÁ. (See Avicenna, ii. 60. vol. i. p. 272. ed. Lat., vol. i. p. 215. ed. Arab.; Ibn Baïtár, vol. ii. p. 554.) *Gr. Transl.*, Καταστατόν.† (See Dioscorides, ii. 123. vol. i. p. 242. "Αμυλον; Galen, *De Aliment. Facult.* i. 8. vol. vi. p. 500.) *Lat.*, Amylum. (*Triticum hybernum*, Linn.) *Engl.*, Wheat Starch. 122, 229, 230, 235.

نفت NIFT. (See Avicenna, ii. 551. vol. i. p. 375. ed. Lat., vol. i. p. 217. ed. Arab.; Ibn Baïtár, vol. ii. p. 558.) *Gr.*, Νάφα. (See Dioscorides, i. 101. vol. i. p. 101.) *Lat.*, Naphtha. *Engl.*, Naphtha. 205, 217.

نوسادر NÚSÁDIR, or نوشادر NÚSHÁDIR. (See Avicenna, ii. 625. vol. i. p. 393. ed. Lat., vol. i. p. 216. ed. Arab.; Ibn Baïtár, vol. ii. p. 562.) *Gr. Transl.*, Τζαπάρικον.‡ *Lat.*, Sal Ammoniacum. (*Ammoniae Hydrochloras*.) *Engl.*, Sal Ammoniac. 144.

هلام HULÁM. p. 38. Note (1).

هليلج HALÍLAJ. [See اهليلج IHLÍLAJ.]

هندباء HINDIBÁ. (See Avicenna, ii. 232. vol. i. p. 311. ed. Lat., vol. i. p. 163. ed. Arab.; Ibn Baïtár, vol. ii. p. 575.) *Gr. Transl.*, "Ιντροβον. (See Dioscorides, ii. 159. vol. i. p. 275. Σέρις; Galen, viii. 18. § 7. vol. xii. p. 119.) *Lat.*, Intybum. (*Cichorium Endivia*, Linn.) *Engl.*, Endive. 62.

وج WAJ. (See Avicenna, ii. 46. vol. i. p. 267. ed. Lat., vol. i. p. 164. ed. Arab.; Ibn Baïtár, vol. ii. p. 580.) *Gr. Transl.*, "Ακορον. (See Dioscorides, i. 2. vol. i. p. 11; Galen, vi. 1. § 18. vol. xi. p. 819.) *Lat.*, Acorum. (*Acorus Calamus*, Linn.) *Engl.*, Common Sweet Flag. 146, 150.

ورد احمر WARD, and ورد احمر WARD ÁHMAR. (See Avicenna, ii. 575. vol. i. p. 380. ed. Lat., vol. i. p. 164. ed. Arab. Ibn Baïtár, vol. ii. p. 582.) *Gr. Transl.*, "Ρόδον. (See Dioscorides, i. 130. vol. i. p. 123; Galen, viii. 17. § 5. vol. xii. p. 114.) *Lat.*, Rosa, and Rosa rubra. (*Rosa Damascena*, or *Rosa centifolia*, Linn.) *Engl.*, Rose, and Red Rose. 66, 70, 100, 124, 132, 134, 184, 230. [See

ماء الورد MÁÜ-L-WARD.]

ورشكين WERASHCÍN. 52, 74, 218, 224, 250? See p. 151. Note J.

وسخ الكوارات WASACHU-L-CUWÁRIT. *Engl.*, Propolis. p. 129. Note (3).

يرشكين YERASHCÍN. p. 125. Note (3).

\* Described by Ibn Baïtár under the name شمع SHAMA', vol. ii. p. 106.

† "Αμυλον δὲ λέγεται τὸ κοινῶς λεγόμενον καταστατόν. (Scholiast on Theocritus, *Idyll.* ix. 21.) See Henr. Stephani *Thesaur. Graec.*

‡ "Αλας ἀμμωνιακόν τὸ τζαπάρικόν. Nicomedes Iatrosophista, *Lexic. MS.* (See Du Cange, *Glossar. Med. et Infim. Graecit.*)

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- ALOE, (*Aloë Arabica*), 'Αλόη. [See **صبر** *Sabir*.]
- "Αλφίτα. [See **سويق** *Sawik*.]
- ALUM, Alumen. [See **شب** *Shabb*.]
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\* The figures refer to the pages of this edition.

نوشادر *Núsádir*, or نوسادر *Núshádir*.]

\*Αμπελος. [See كرم *Carm.*]

AMYGDALA DULCIS, and AMYGDALA AMARA, (*Amygdalus communis*.) 'Αμύγδαλον. [See لوز حلو *Lauz Hulw*, and لوز مرّ *Lauz Murr.*]

\*Αμυγδαλέλαιον. [See صمغ اللوز *Samagu-l-lauz.*]

\*Αμυγδάλινον ἔλαιον. [See دهن اللوز *Duhnu-l-lauz.*]

AMYLUM, \*Αμυλον. [See نشاء *Nashá.*]  
ANDARENIAN SALT, Sal Andarenius, [See ملح اندراني *Milh Andarání.*]

\*Ανδράχνη. [See بقلة الحمقاء *Baklatu-l-hamká.*]

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\*Ανθεμís. [See بابونج *Bábunaj.*]

ANTIMONY, Antimonium, (*Antimonii Sesquisulphuretum*.) [See كحل *Cuhl*; also اثمّد *Ithmid.*]

\*Αφόδευμα. [See زبل *Zibl.*]

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APIUM, (*Apium graveolens*.) [See

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\*Απόπατος. [See بعّر *Ba'r*; also زبل *Zibl.*]

APPLE. [See تفاح *Tuffáh.*]

ARGILLA BOLUS FLAVA. [See طين مختوم *Tin Machtúm.*]

ARGILLA BOLUS RUBRA. [See طين الارمني *Tínu-l-Armení.*]

ARIES. [See حمل *Hamal.*]

ARISTOLOCHIA LONGA, Ἀριστολοχία μακρά. [See زراوند طويل *Ziráwand Tawíl.*]

ARMENIAN BOLE, Bolus Armena, Βώλος Ἀρμενιακός. [See طين الارمني *Tínu-l-Armení.*]

ARTEMISIA DRACUNCULUS. [See طرخون *Tarchún.*]

ARUNDO, (*Arundo donax*.) [See قصب *Kasab.*]

ASS, Asinus, (*Asinus vulgaris*.) See حمار *Himár.*

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ASTRAGALUS VERUS. [See كثيرا *Cathíra.*]

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\*Αθήρη. [See عسيدة *Asidah.*]

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ATTAR (OIL) OF ROSES. [See دهن ورد *Duhn Ward.*]

AT-TARMADÍ, quoted, 121, 122; account of, 170.

AUKLANDIA COSTUS. [See قسط *Kust.*]

BACHTÍSHWA', quoted, 121; account of, 170.

BACK, pain in the, 34, 44, 84, 91.

Βαλάνινον ἔλαιον. [See دهن بان *Duhn Bán.*]

Βάλανος Μυρεψική. [See بان *Bán.*]

BALAUSTINES, Balaustium, Βαλαύστιον. [See جلائر *Jalnár.*]

BALSAMODENDRON MYRRHA. [See مرّ *Murr.*]

Βαμβάκιον. [See قطن *Kutn.*]

- BAMBUSA ARUNDINACEA. [See  
طباشير *Tabáshir.*]
- BARBERRY, Berberis, (*Berberis vul-*  
*garis.*) [See انبرباريس *Am-*  
*barbáris.*]
- BARLEY. [See شعير *Sha'ir.*]
- BARLEY WATER. [See ماء الشعير *Maü-sh-sha'ir.*]
- BASILIC VEIN. [See باسليق *Bá-*  
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- BASTARD SPONGE. [See زبد البحر *Zabadu-l-bahr.*]
- BAT. [See خفاش *Chafásh.*]
- BEAN. [See باقلاي *Bákila.*]
- BEAN, KIDNEY. [See لوبياء *Lubíá.*]
- BEN NUT. [See بان *Bán.*]
- BERBERIS LYCIUM, and BERBERIS  
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- Βερβίκη. [See سندروس *Sin-*  
*darús.*]
- BILE, YELLOW. [See صفراء *Safrá.*]
- BLITUM, (*Blitum capitatum*), Βλήτρον,  
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- BIRTHWORT. [See زراوند طويل *Zirawánd Tawíl.*]
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- BLOOD-LETTING recommended, 37, 45,  
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- BRAN. [See نوخالة *Nuchálah.*]
- BRASSICA, (*Brassica oleracea*). [See  
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- BUTTER, (*Butyrum*), Βούτυρον. [See  
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- CABBAGE. [See كرنب *Caramb.*]
- CALAMUS DRACO. [See دم الاخوين *Damu-l-achwain.*]
- CALP. [See عاجول *'Ijjaul.*]
- CALLITRIS QUADRIVALVIS. [See  
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*Bactrianus.*) [See ابل *Ibl*; also  
لقاح *Lekáh*, and جمل *Jaml.*]
- CAMEL'S THORN. [See حاج *Háj.*]
- CAMPHOR, COMMON or LAUREL, (*Cam-*  
*phora Officinarum*), Κάφουρα. [See  
كافور *Cáfúr.*]
- CANCER MARINUS, (*Cancer Pagurus*).  
[See سرطان البحري *Sa-*  
*ratánu-l-bahrí.*]
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CUCURBITA, (Cucurbita Pepo.) [See قرع Kar'.]

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- DACTYLUS. [See **تمر** *Tamr.*]
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 PEPPER, Piper, (*Piper longum.*) Πέπερι. [See **فلفل** *Fulful.*]  
 Φάκη. [See **عدس** *'Adas.*]  
 PHASEOLUS, (*Phaseolus vulgaris.*) [See **لوبياء** *Lúbiá.*]  
 PHASEOLUS MUNGO. [See **ماش** *Másh.*]  
 PHASTANUS GALLUS. [See **دجاج** *Dajáj.*]  
 Φάσουλος. [See **لوبياء** *Lúbiá.*]

PHEASANT, Phasianus, (*Phasianus Colchicus*), Φασιανός. [See تدرج *Tadrāj.*]

PHOENIX DACTYLIFERA, Φοῖνιξ. [See تمر *Tamr.*]

Φλίκταιναι. [See بثور *Buthúr.*]

PISTACHIO, Pistacia, (*Pistacia vera*), Πιστάκια. [See فستق *Fustak.*]

Πιστακοέλαιον. [See دهن الفستق *Duhnū-l-fustak.*]

PISUM, Πίσσον. [See ماش *Māsh.*]

Πίτυρον. [See نوخالة *Núchálah.*]

PLANTAGO PSYLLIUM. [See قطونا *Kutúná.*]

PLUMBI OXYDUM. [See مرداسنج *Mardásanj*; also مرترك *Murtac.*]

POMEGRANATE. [See رمان *Rum-mán.*]

POMEGRANATE FLOWERS. [See حنار *Jalnár.*]

POMUM. [See تفاح *Tuffah.*]

POPPY. [See خشخاش *Chash-chásh.*]

POPPY, RED HORN. [See ماميثا *Mámíthá.*]

PORTULACA, (*Portulaca oleracea*). [See بقلة الحمقاء *Baklatu-l-hamká.*]

POTASSAE ALUMINO-SULPHAS. [See شب *Shabb.*]

POTASSAE NITRAS FUSA(?). [See بورك *Baurak.*]

PRICKLY SALTWORT. [See اشنان *Ushnán.*]

PROPOLIS. [See وسخ الكوارات *Wasachu-l-cuwrát.*]

PRUNUM DAMASCENUM, (*Prunus domestica*). [See اجاص *Ijjás.*]

Ψάρος. [See زرزور *Zurzúr.*]

PSYLLIUM, Ψύλλιον. [See قطونا *Kutúná.*]

PUNICA GRANATUM. [See حنار *Jalnár*; also رمان *Rummán.*]

Πυρός. [See حنطة *Hintah.*]

PURSLAIN. [See بقلة الحمقاء *Baklatu-l-hamká.*]

PUSTULES. [See بثور *Buthúr.*]

PUTCHUK. [See قسط *Kust.*]

PYRGITA DOMESTICA. [See عصفور *'Uşfür.*]

PYRUS MALUS. [See تفاح *Tuffah.*]

QUERCUS, (*Quercus Robur*). [See بلوط *Ballút.*]

QUERCUS INFECTORIA. [See عصف *'Afsah*, or عفصة *'Afs.*]

QUINCE. [See سفرجل *Safarjal.*]

RABBI. [See ربن *Rabn.*]

RADISH. [See فجل *Fujl.*]

ῥάϊπ. [See رايب *Ráib.*]

RAISIN. [See زبيب *Zabib.*]

RAM. [See حمل *Hamal.*]

RAPHANUS, (*Raphanus sativus*), ῥαπίς. [See فجل *Fujl.*]

RED HORN POPPY. [See ماميثا *Mámíthá.*]

REED. [See قصب *Kasab.*]

RHAZES, account of, 137, &c.

RHEUM RIBES. [See ريbas *Ríbás.*]

RHUBARB, WARTED LEAVED. [See ريbas *Ríbás.*]

- RHUS, (*Rhus coriaria*), 'Ροῦς Συριακός, [See سَمَّاق *Summāk*.]  
 'Ροῦς. [See رِبَّاس *Ribās*.]  
 RIBES. [See رِبَّاس *Ribās*.]  
 RICE. [See اَرَز *Aruz*.]  
 ROB. [See رُب *Rubb*.]  
 ROCKET. [See جَرَجِير *Jirjir*.]  
 'Ρόδινον "Ελαιον. [See دهن ورد *Duhn Ward*.]  
 'Ροδά, or 'Ροδίνον. [See رَمَان *Rummán*.]  
 ROSE, and RED ROSE, (*Rosa Dámascena*, or *Rosa centifolia*), 'Ρόδον.  
 [See ورد احمر *Ward, and Ward Ahmar*.]  
 ROSE WATER, 'Ροδόσταγμα, 'Ροδοστά-  
 λαγμα. [See ماء الورد *Maü-l-ward*.]  
 ROSED HONEY. [See جُلَنَجَبِين *Julanjabín*.]  
 RUE, *Ruta*, (*Ruta graveolens*.) [See سَذَاب *Sadháb*.]  
 RUMEX OBTUSIFOLIUS. [See حَمَّاض *Hummád*.]  
 RUSOT. [See حَضَض *Hudád*.]  
 SACCHARUM, (*Saccharum Officinarium*), Σάκχαρ, or Σάκχαρον μέλιτος.  
 [See سَكَّر *Succar*.]  
 SAFFRON. [See زَعْفَرَان *Za'farán*.]  
 SAGAPENUM, Σαγαπηνόν. [See سَكْبِينَج *Sicbínaj*.]  
 SAL AMMONIAC. [See نُوَسَادِر *Núsadir*, or نوَشَادِر *Núshadir*.]  
 SAL PRUNELLA. [See بَوْرَق *Baurák*.]  
 SALIX, (*Salix Aegyptiaca*.) [See خَلَف *Chiláf*.]  
 SALSOLA KALI. [See اَشْنَان *Ush-nán*.]  
 SALT, COMMON, Sal. [See مِلْح *Milh*.]  
 SALTWOOD, PRICKLY, (*Salsola Kali*.)  
 [See اَشْنَان *Ushnán*.]  
 SANDARACH, Sandaracha. [See سِنْدَرُوس *Sindarus*.]  
 SANDERS, WHITE, (*Santalum album*),  
 Σάνταλον. [See صَنْدَل اَبِيض *Sandal Abyad*.]  
 SAPO, Σάπων. [See صَابُون *Sabún*.]  
 SARCOCOL, Sarcocolla, Σαρκοκόλλα.  
 [See عَنَزْرُوت *Anzarút*, or انزروت *Anzarút*.]  
 SAWÍK. [See سَوِيْق *Sawík*.]  
 SCORIAE OF GLASS. [See مَسْحَقُونِيَا *Mazahkúniá*.]  
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 Σέλινον. [See كَرْفَس *Carafs*.]  
 SERAPION, quoted, 109; account of, 166.  
 Σέρις. [See هِنْدِيبَا *Hindibá*.]  
 SERPENT CUCUMBER WATER. [See ماء الخيار *Maü-l-chiár*.]  
 Σησαμέλαιον. [See دهن خل *Duhn Chall*.]  
 SESAMUM, (*Sesamum orientale*), Σήσα-  
 μον. [See سَمْسَم *Simsim*.]  
 SIEF. [See شِيَاْف *Shiáf*.]  
 Σκορδαλάζαρον. [See سَكْبِينَج *Sicbínaj*.]  
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 SMALL-POX, causes of, &c., 27, &c., 115, 129; what habits of body are most disposed to, 32, 130; in what seasons it is most prevalent, 33, 105, 115, 117, 130; symptoms of, 34, 84, 90, 102, 103, 104, 105, 106, 107, 115, 121, 124, 126, 127; mode of preservation from, before the symptoms appear, 37, &c.; mode of accelerating the pustules, 47, &c.; mild and fatal species of, 71, &c., 86, 94, 103, 104, 115, 116, 127.

- SMALL POX. [See جدري *Jadarí.*]  
 Σμίλαξ. [See لوبياء *Lúbiá.*]  
 Σμύρνα. [See مرّ *Murr.*]  
 SOAP. [See صابون *Sabún.*]  
 SODA. [See صداع *Sudá.*]  
 SOLANUM, (*Solanum nigrum.*) [See  
 عنب الثعلب *'Inabu-th-tha'-  
 leb.*]  
 Σούσινον. [See دهن السوسن *Duhnu-s-súsan.*]  
 SPARROW. [See عصفور *'Uşfür.*]  
 Σπόδιον. [See طباشير *Tabáshir.*]  
 Στακοκόλλητον. [See عنزروت *'Anzarút.*]  
 Σταφίς. [See زبيب *Zabib.*]  
 STARCH. [See نشاء *Nashá.*]  
 STARLING. [See زرزور *Zurzur.*]  
 Σταφυλή. [See عنب *'Inab.*]  
 STERCUS. [See بعر *Ba'r*; also  
 زبل *Zibl.*]  
 STIBIUM, Στίμι. [See اثمَد *Ith-  
 mid*; also كحل *Cuhl.*]  
 STRAWBERRY BLITE. [See بقلة  
 اليمانية *Baklatu-l-Yemáníyah.*]  
 Στρούθιον. [See عصفور *'Uşfür.*]  
 Στρύχνον. [See عنب الثعلب  
*'Inabu-th-tha'leb.*]  
 Στύψις, Στυπτηρία. [See شَب  
*[Shabb.]*]  
 STURNUS, (*Sturnus vulgaris.*) [See  
 زرزور *Zurzur.*]  
 SUGAR CANDY. [See طبرزد *Ta-  
 barzd.*]  
 SUGAR, Saccharum, (*Saccharum Offici-  
 narum*) Σάκχαρ, Σάκχαρον μέλιτος.  
 [See سكر *Succar.*]  
 Συκόμορον, or Συκομόριον. [See  
 توت *Tút*, or ثوت *Túth.*]  
 Σύκον. [See تين *Tín.*]  
 SUMACH. [See سماق *Summák.*]  
 SUSIAN BOLE, Susiana Bolus. [See  
 طين خوزي *Tín Chúzi.*]  
 SUSIANUM ELECTUARIUM. [See  
 خوزي *Chúzi.*]  
 SWALLOW. [See خطاف *Chutáf.*]  
 SWEET FLAG, COMMON. [See وج  
*Waj.*]  
 SYRUP. [See شراب *Sharáb.*]  
 TABASHEER. [See طباشير *Tabá-  
 shir.*]  
 TABRÍ. [See AT-TABARÍ.]  
 TAMARISK, Tamariscus, (*Tamarix  
 Gallica.*) [See طرفا *Tarfá.*]  
 TAMARISK, WHITE, (*Tamarix Orien-  
 talis.*) [See اثل *Athl.*]  
 TARMADÍ. [See AT-TARMADÍ.]  
 TARRAGON, Ταρχός. [See طرخون  
*Tarchún.*]  
 TEEL OIL. [See دهن خل *Duhn  
 Chall.*]  
 TERENGIABIN. [See ترنجبین  
*Taranjabin.*]  
 TERMINALIA CHEBULA. [See اهليلج  
*Ihlilaj*, or هليلج *Halilaj.*]  
 Τετραγγορον. [See خيار *Chlár.*]  
 TETRAO FRANCOLINUS. [See  
 دراج *Durráj.*]  
 Θέρμος. [See ترمس *Tarmas.*]  
 Θριδακίνη. [See خس *Chass.*]  
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 101, 105, 126, 128.  
 THUS. [See كندر *Cundur.*]  
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- Touria. [See **توتيا** *Tútíá.*]  
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 Τρικύμνον. [See **ترنجبین** *Ta-ranjábín.*]  
 TRITICUM HYBERNUM. [See **نشاء** *Nashá.*]  
 TRITICUM, (*Triticum vulgare.*) [See **حنطة** *Hintah.*]  
 Τρύχνον. [See **عنب الشعاب** *'Inabu-th-tha'leb.*]  
 TUNICA UVEA. [See **سواف** *Sawáf.*]  
 TUTTY, Tutia. [See **توتيا** *Tútíá.*]  
 Τζαπάρικον. [See **نوسادر** *Núsádir,*  
 or **نوشادر** *Núshádir.*]  
 URINE, Urina. [See **بول** *Baul.*]  
 UVA. [See **عنب** *'Inab.*]  
 UVA PASSA. [See **زبيب** *Zabíb.*]  
 UVEA TUNICA. [See **سواف** *Sawáf.*]  
 VENA BASILICA. [See **باسليق** *Básilik.*]  
 VENA CEPHALICA. [See **قيفال** *Kifál.*]  
 VENA MEDIANA. [See **اڪحل** *Achal.*]  
 VENA SAPHENA. [See **صافن** *Sáfin.*]  
 VERDIGRIS. [See **زنجار** *Zanjár.*]  
 VESICLES. [See **تنقط** *Tanaffat.*]  
 VESPERTILO, (*Vespertilio murinus.*)  
 [See **خفاش** *Chafásh.*]  
 VETCH. [See **حمص** *Himmas.*]  
 VIGILATOR. [See **As-SÁHER.**]  
 VINE. [See **كرم** *Carm.*]  
 VINEGAR. [See **خل** *Chall.*]  
 VIOLET, Viola, (*Viola odorata.*) [See **بنفسج** *Banafsaj.*]  
 VITIS, (*Vitis vinifera.*) [See **زبيب** *Zabíb,* also **كرم** *Carm,* and **عنب** *'Inab.*]  
 VITRUM. [See **زجاج** *Zajáj.*]  
 VITULUS. [See **عجول** *'Ijjaul.*]  
 WATER MELON. [See **فقس** *Fakkús.*]  
 WAX. [See **شمع** *Shamá';* also **موم** *Múm.*]  
 WHEAT. [See **حنطة** *Hintah.*]  
 WHEAT STARCH. [See **نشاء** *Nashá.*]  
 WHEY. [See **ماء البجن** *Maü-l-jabn.*]  
 WILLOW. [See **خلاف** *Chiláf.*]  
 WOODCOCK. [See **دراج** *Durráj.*]  
 YSAAC. [See **ISHAK.**]  
 ZINC, IMPURE OXIDE OF. [See **توتيا** *Tútíá.*]  
 ZIZYPHA, (*Zizyphus vulgaris,*) *Ζίζυφον.*  
 [See **عذاب** *'Unnáb.*]  
 Ζουλάπιον. [See **جلاب** *Juláb.*]



## ADDITIONS AND CORRECTIONS.

- Page 27. Note (2). for §§ 56, 65] read, § 54.  
 — — — (6). for 65] read, 63.  
 — — — (7). for 56, 65] read, 54, 63.  
 — 28. — (1). for 56] read, 54.  
 — 35. Note (1). for 67] read, 65.  
 — 41. — (1). for طباشير] read, طباشير  
 — 45. l. 4. for (1)] read, (2).  
 — — l. 6. for inner] read, median.  
 — 68. — (1). for Taranjubin] read, Taranjabin.  
 — — — (2). for حالج] read, حاج  
 — 69. — (2). for رايب] read, رايب  
 — 72. — (1). for 5] read, 6.  
 — — — (2). for غشي gashyon] read, غشي gashy.  
 — 91. Note (1). for Hummau] read, Hummaü.  
 — 95. — (3). for ماميثا] read, ماميثا  
 — 129. — (9). for Suhulah.... Sahucah] read, Suhulah.... Sahucah.  
 — 135. for حصبة] read, حصبة  
 — 139. Note (1). for الماء] read, الماء  
 — 140, 141. The titles of three or four short pieces, which have appeared among his "Opera Parva," have been inadvertently omitted, but they will be found mentioned in Haller and Choulant.  
 — 141. — D. for قاطاجانس] read, قاطاجانس  
 — 158. — S. for Mashukúniá] read, Masahkúniá.  
 — 166. — EE. for Yayha] read, Yahya.  
 — — — — for ابن] read, ابن  
 — — — (1). for البنداديقون] read, البنداديقون  
 — — — (2). for Amrusiá] read, Amrúsiá.

Page 173. The Translator has since found the same name in two other passages in Ibn Baitár (i. 329, 412.), where it is written by Sontheimer *Tahur Sophos*, and *Táhursofus*; but with no important variation in the Arabic MSS., except

that in one place it is written اطهورسيقس

- 190. SAMAGU-Z-ZAITÚN. The words *κομίδη* "Ελαιον in the Greek Translation are evidently corrupt, and probably should be read *κόμμι ελαίου*, or *κόμμι ἐξ ελαίου* (or -ων).
- 191. Note ‡, for iii. 30.] read, iii. 33.
- 193. for [وسط] read قسط
- 202. FLEA-WORT. for [قطوباء] read قطونا
- — *Γάγγραινον*. for [اندراني] read اندراني
- 203. GALLS. for عفس read عفس
- 205. MANNA. for [نرباجبين] read نرباجبين
- — *Μήλον*. for [تافح] read تفاح
- 195. Note ¶ for عروق 'Urúk] read عروق الصابغين

'Urúku-s-sabagin.

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Godrich, Francis, esq.	Grove House, Little Chelsea
Goodfellow, J. M.D.	9, Bedford place, Russell square
Goodwin, J. M. esq.	Streatham, Surrey
Goolden, R. H. M.D.	41, Sussex Gardens
Gordon, Adam, esq. R.N.	22, Surrey street, Strand
Grainger, R. D. esq.	St. Thomas's Hospital
Grant, John, esq. E.I.C.	71 A, Grosvenor street
Gray, John, esq.	7, Upper George street, Portman square
Greenhalgh, Robert, esq.	66, Upper Charlotte street, Fitzroy square
Greenwood, Henry, esq.	1, Horsleydown lane
Griffith, Samuel Hallet, esq.	2, Charterhouse square
Guazzaroni, John, esq.	3, Terrace, Kensington
Guest, Edmund, esq.	19, Selsby place, Whitehead's grove
Gull, W. W. M.B.	Guy's Hospital
Gulliver, G. esq.	Royal Regiment of Horse Guards
Gunthorpe, George John, esq.	Lower Tooting
Guy, W. A. M.B.	15, Bloomsbury square
Hall, Marshall, M.D.	14, Manchester square
Hamilton, Alfred, esq.	1, Broad street buildings
Hansard, R. J. esq.	2, Kensington Garden terrace
Harding, J. F. esq.	6, Mylne street, Myddelton square
Hardwick, Alfred, M.D., (the late)	28, Lower Phillimore place, Kensington
Hardwicke, William, esq.	24, Lower Calthorpe street, Gray's Inn road
Harper, Robert, esq.	85, Westbourne terrace, Hyde park
Harris, Hetman Charles, esq.	Windsor place, City road
Harris, Wintour, esq.	1, New Dorset place, Clapham road
Harris, Michael, esq.	7, Paradise place, Hackney
Harston, A. D. esq.	22, Trinidad place, Islington
Hastings, John, M.D.	14, Albemarle street
Hawkins, Cæsar, esq.	for Roy. Med. Chirurgical Society
Hawkins, James, esq.	36, Collett place, Commercial road
Hawkins, Charles, esq.	Albany court yard
Hayward, Robert N. esq.	18, Porchester terrace, Bayswater
Headland, Edward, esq.	32, Guildford street
Hensley, J. F. esq.	3, Great James street, Bedford row
Hering, William, esq.	38, Mortimer street
Herring, William, esq.	74, Sun street, Bishopsgate
Heisch, Frederick, esq.	16, America square
Hilton, John, esq.	for Medical Library, Guy's Hospital
Hilton, John, esq.	10, New Broad street
Hird, Francis, esq.	Cleveland row, St. James's
Hodges, R. esq.	17, Upper Barnsbury street, Islington
Hodgkin, Thomas, M.D.	9, Lower Brook street
Hodgson, Joseph, esq.	1, Spital square, Bishopsgate street without
Holland, Henry, M.D.	25, Lower Brook street
Holland, L. esq.	43, Robert street, Hampstead road
Holman, Andrew, esq.	10, John street, America square
Holman, William H. esq.	ditto
Holman, J. R. esq.	ditto
Holman, Charles H. esq.	ditto
Hood, W. C. M.D.	39, Trinity square, Tower street



Howell, C. W. H. esq. . .	Stratford-le-Bow, North place
Hughes, H. M. M.D. . .	14, St. Thomas's street, Borough
Humby, Edwin, esq. . .	1, Windsor terrace, Maida hill
Humphreys, William, esq. .	10, Southwick street
Hunt, Henry, M.D. . .	68, Brook street
Hutchinson, W. Barclay, esq. .	40, Guildford street
Hutchinson, Francis, esq. .	92, Farringdon street
Huxtable, William, esq. . .	1, Well's row, Hackney
J'aanson, Thomas F. esq. . .	8, Elm terrace, Brompton
Jackson, Alfred, esq. . .	58, Albert street, Mornington road
Jackson, Thomas Carr, esq. .	Royal Free Hospital, Gray's Inn road
Jacob, William, esq. . .	31, Cadogan place
James, Henry, esq. . .	Artillery place, Finsbury
Jay, Henry, esq. . .	50, Sloane street
Jeaffreson, Henry, M.D. . .	2, Finsbury square
Jeaffreson, John F. esq. . .	11, Canonbury square, Islington
Jenkins, James, esq. . .	Royal Navy, 13, Clement's inn
Jervis, Thomas, esq. . .	24, Upper Seymour street, Portman square
Johnson, Edward, M.D. . .	42, Carnaby street, Golden square
Jones, Thomas W. M.D. . .	19, Finsbury Pavement
Jones, Henry Derviche, esq. .	23, Soho square
Jones, John Dalton, esq. . .	1, Queen's road, Dalston
Iliff, William T. esq. . .	19, Canterbury row, Newington Butts
Illingworth, Henry S. esq. .	1, Arlington street, Piccadilly
Isard, J. C. esq. . .	University College
Kay, W. T. esq. R.N. . .	Admiralty Office, Somerset House
Keen, Thomas, esq. . .	15, Manor place north, King's road, Chelsea
Kelsall, Thomas E. esq. . .	6, Great Winchester street, City
Kemphorne, John, esq. . .	London University
Kesteven, William, esq. . .	1, Manor road, Upper Holloway
Kinnis, J. M.D. . .	17, Charles street, St. James's
Kirkes, Wm. Senhouse, M.D. .	12, Connaught terrace, Hyde park
Knight, Thomas, esq. . .	5, Thistle Grove, Little Chelsea
Lambert, H. esq. . .	St. Luke's Hospital, Old street
Lane, Samuel, esq. . .	1, Grosvenor place
Langmore, J. C. esq. . .	15, Upper George street, Portman square
Langmore, William, M.D. . .	40, Finsbury square
Langstaff, J. esq. . .	9, Cambridge square, Hyde park
Lankester, Edwin, M.D. . .	22, Old Burlington street
Latham, P. Mere, M.D. . .	29, Upper Southwick street
Laurie, D. C. esq. . .	12, Lower Berkeley street, Portman square
Law, Charles, esq. . .	3, Artillery place, Finsbury square
Leeson, H. B. M.D. . .	St. Thomas's Hospital
Leonard, Thomas, M.D. . .	14, Aske terrace, Hoxton
Letheby, Henry, M.D. . .	London Hospital
Lever, J. C. W. M.D. . .	12, Wellington street, Borough
Liddell, John, esq. . .	4, Alie place
Liston, Robert, esq. . .	5, Clifford street
Little, W. J. M.D. . .	10, Finsbury square (2 sets)
Lloyd, W. W. esq. . .	62, Great Russell street, Bloomsbury
Lobb, William, esq. . .	12, Aldersgate street
Lockley, Thomas, M.D. . .	6, St. George's place, Hyde park corner
Locock, Charles, M.D. . .	26, Hertford street, May Fair
Luke, James, esq. . .	39, Broad street buildings
Lonsdale, Edward, esq. . .	<i>for Library, Middlesex Hospital</i>
Lonsdale, Edward F. esq. . .	82, Guildford street, Russell square
Mackenzie, Frederick Wm. M.D. .	11, Chester place, Hyde park square
Maclachlan, Daniel, M.D. . .	Chelsea Hospital
Macmurdo, Gilbert, esq. . .	New Broad street
M'William, W. M.D. R.N. . .	14, Trinity square, Tower hill
M'Gregor, Sir James, Bart. . .	13, St. James's place

M'Intyre, William, M.D. . . .	84, Harley street
Mann, John, esq. . . .	Charterhouse square
Markwick, Alfred, esq. . . .	19, Langham place
Marshall, John, esq. . . .	8, Crescent place, Mornington crescent
Marson J. F. esq. . . .	Smallpox Hospital
Martin, J. R. esq. . . .	71 A, Grosvenor street
Mathew, John Edward, esq. . .	Church Cottage, De Beauvoir square, Kingsland
Mathews, R. N. B. jun. esq. . .	18, Canterbury row, Newington Butts
Merriman, Jas. Nathaniel, esq.	Kensington
Merriman, S. W. J. M.D. . . .	34, Brook street (2 sets)
Metcalfe, James B. esq. . . .	Church street, Hackney
Miles, John, esq. . . .	17, Charterhouse square
Miles, R. D. esq. . . .	King's College Hospital
Miller, C. M. esq. . . .	1, Claremont place, Stoke Newington
Milroy, Gavin, M.D. . . .	30, Fitzroy square
Moore, Joseph, M.D. . . .	10, Saville row
Morgan, John, esq. . . .	Albion place, Hyde park square
Morris, James, esq. . . .	79, Park street, Grosvenor square
Morley, Atkinson, esq. . . .	Burlington Hotel, Cork street
Murchison, Simon, esq. . . .	7, Grosvenor street
Murdock, William, M.D. . . .	320, Rotherhithe street
Nairne, Robert, M.D. . . .	44, Charles street, Berkeley square
Nasmyth, Alex. esq., (the late)	13 A, George street, Hanover square
Newell, H. A. esq. . . .	St. Bartholomew's Hospital
Newton, Edward, esq. . . .	26, Howland street
Nicholson, Brinsley, M.D. . .	Dep. Insp. of Hospitals
Nicoll, Charles R. esq. . . .	41, Rochester row, Westminster
Nicolson, Thomas, esq. . . .	50, Davies street
North, John, esq. . . .	9 A, George street, Portman square
Nussey, John, esq. . . .	4, Cleveland row, St. James's
Odling, George, esq. . . .	159, High street, Borough
Oldham, Henry, M.D. . . .	13, Devonshire square, Bishopsgate
Oliver, John, M.D. . . .	28, Harleyford place, Kennington
Ottley, Drewry, esq. . . .	5, Lower Bedford place
Owen, Richard, esq. . . .	College of Surgeons
Page, William E. M.D. . . .	38, Curzon street, May Fair
Pardoe, George, M.D. . . .	22, Cavendish square
Paris, John Ayrton, M.D. . . .	27, Dover street
Parke, E. A. M.D. . . .	3, Upper Seymour street
Partridge, R. esq. . . .	Spring Gardens
Peacock, Thomas B. M.D. . .	20, Finsbury circus
Percival, W. esq. . . .	First Life Guards
Pereira, Jonathan, M.D. . . .	47, Finsbury square
Perkins, Dodd, esq. . . .	St. Thomas's Hospital
Perkins, Houghton, esq. . . .	25, Mortimer street, Cavendish square
Perry, John, esq. . . .	4, Eaton square, Pimlico
Pettigrew, William V. M. D. . .	39, Chester street, Grosvenor place west
Philp, Francis R. M.D. . . .	25, Grosvenor street
Phillips, Benjamin, esq. . . .	17, Wimpole street
Phillips, James, esq. . . .	White House, Bethnal green
<i>Physicians, Royal College of</i> . .	13, Pall Mall
Pilcher, George, esq. . . .	7, Great George street, Westminster
Pitman, H. A. M.D. . . .	28, Montague place, Russell square
Poland, Alfred, esq. . . .	4, Cloak lane, Cheapside
Pollard, E. W. esq. . . .	Brompton
Pollock, T. esq. . . .	26, Hatton Garden
Powell, Henry, M.D. . . .	36, Finsbury square
Powell, David, esq. . . .	21, Garnault place, Spa Fields
Powell, W. M. esq. . . .	2, Claylands place, Clapham road
Quain, Richard, M.D. . . .	23, Harley street
Quain, Richard, esq. . . .	23, Keppel street

Ransom, W. H. esq.	. . .	University College
Ray, George, esq.	. . .	22, Finsbury square
Ree, Henry P. esq.	. . .	11, Union place, City road
Reed, Septimus, esq.	. . .	41, Jewin street, City
Rees, Henry, esq.	. . .	45, Finsbury square
Rees, G. Owen, M.D.	. . .	59, Guildford street
Reynolds, H. esq.	. . .	15, Cambridge terrace
Rhys, Thomas, esq.	. . .	University College Hospital
Richardson, William, esq.	. . .	19, Oxford terrace
Ridesdale, G. E. esq.	. . .	1, Gower place, Euston square
Ridge, Joseph, M.D.	. . .	37, Cavendish square
Riding, Roger, M.D.	. . .	36, Euston square
Roberts, Charles I. M.D.	. . .	31, New Bridge street, Blackfriars
Roberts, John, esq.	. . .	34, Finsbury circus
Robertson, T. S. M.D.	. . .	36, Assembly row, Mile end road
Robins, William, esq.	. . .	16, Upper Southwick street
Robinson, James, esq.	. . .	7, Gower street
Robinson, Richard R. esq.	. . .	4, Camden row, Camberwell
Rochford, William, esq.	. . .	34, Brewer street, Golden square
Roods, Henry C. esq.	. . .	67, Great Russell street, Bloomsbury
Roots, H. S. M.D.	. . .	2, Russell square
Rogers, Joseph, esq.	. . .	Wardour street
Rose, C. esq.	. . .	10, Barnes place, Mile end
Ross, Daniel, esq.	. . .	56, High street, Shadwell
Rousseau, Isambert, esq.	. . .	103, Milton street, Dorset square
Rowe, J. esq.	. . .	University College
Rowland, Richard, M.D.	. . .	9, Woburn place, Russell square
Royle, J. Forbes, M.D.	. . .	4, Bulstrode street, Cavendish square
Saunders, E. esq.	. . .	George street, Hanover square
Saunders, W. Sedgwick, esq.	. . .	7th Fusiliers, 12, Titchborne street
Savage, Henry, M.D.	. . .	34, Dorset place, Dorset square
Savory, John, esq.	. . .	136, New Bond street
Scott, John, M.D.	. . .	13, Stratton street, Piccadilly
Scott, John, M.D.	. . .	12, Bedford square
Searle, G. C. esq.	. . .	42, Cumming street, Pentonville
Seaton, Edward, M.D.	. . .	77, Sloane street
Self, James, esq.	. . .	8, Mile end road, north
Scriven, John Barclay, esq.	. . .	78, George street, Euston square
Sharpe, Richard, esq.	. . .	10, Grange road, Bermondsey
Sharpey, William, M.D.	. . .	35, Gloucester crescent, Regent's park
Shute, Robert Grueber, esq.	. . .	27, Mecklenburgh square
Sieveling, Edward, M.D.	. . .	59, Brook street
Skey, Fred. C. esq.	. . .	13, Grosvenor street
Smee, Alfred, esq.	. . .	7, Finsbury circus
Smith, Henry, esq.	. . .	17, Henrietta street, Cavendish square
Smith, Ebenezer, esq.	. . .	7, Billiter square
Solly, Samuel, esq.	. . .	1, St. Helen's Place, Bishopsgate
Squibb, George James, esq.	. . .	6, Orchard street, Portman square
Squire, William, esq.	. . .	Wandsworth road
Stephen, T. esq.	. . .	Medical Library, King's College
Stewart, A. P. M.D.	. . .	74, Grosvenor street, Grosvenor square
Stewart, Haldane, esq.	. . .	55, Cadogan place
Stewart, Wm. Edward, jun. esq.	. . .	1A, Weymouth street, Portland place
Stewart, Wm. esq.	. . .	1, Wells row, Hackney
Stoker, James, esq.	. . .	Guy's Hospital
Stokoe, Richard, esq.	. . .	Peckham Rye
Stone, Daniel, esq.	. . .	4, Conduit street, west, Hyde park
Storks, Robert, esq.	. . .	44, Gower street
Stott, Thomas B. esq.	. . .	Aldersgate Dispensary, 36, Aldersgate street
Stowers, Noel, esq.	. . .	5, York row, Kennington
Sutherland, Alex. J. M.D.	. . .	1, Parliament street

Swaine, W. E. M.D.	. . .	6, Upper Seymour street, Portman square
Synnott, Robt. M.D.	. . .	76, Cadogan place
Tanner, Thomas Hawkes, M.D.	. . .	10, Charlotte street, Bedford square
Tamplin, Richard Wm. esq.	. . .	Great Queen street, Lincoln's-inn fields
Taunton, John C. esq.	. . .	48, Hatton Garden
Taylor, C. esq.	. . .	4, Bethel place, Camberwell
Teevan, William, esq.	. . .	23, Bryanstone square
Tegart, Edward, jun. esq.	. . .	39, Pall Mall
Thompson, Theophilus, M.D.	. . .	3, Bedford square
Thompson, Richard, esq.	. . .	<i>for London Institution</i> , 11, Finsbury circus
Thomson, Anth. Todd, M.D.	. . .	30, Welbeck street
Thwaites, Thomas B. esq.	. . .	15, Henrietta street, Brunswick square
Todd, Robert B. M.D.	. . .	3, New street, Spring Gardens
Tomkins, C. Joseph, esq.	. . .	20, Colet place, Commercial road
Toulmin, Frederick, esq.	. . .	Upper Clapton
Townsend, John A. esq.	. . .	48, Finsbury circus
Travers, Benjamin, esq.	. . .	12, Bruton street
Travers, James, esq.	. . .	367, Rotherhithe wall
<i>Treasurer of Medical Society</i>	. . .	University College, London
<i>Treasurer of St. George's Hospital Library.</i>		
Tripe, John William, esq.	. . .	7, King's place, Batty street, Commercial road
Tulk, John Augustus, esq.	. . .	25, Charlotte street, Portland place
Tweedie, Alexander, M.D.	. . .	30, Montague place, Bedford square
Ure, Alexander, M.D.	. . .	13, Charlotte street, Bedford square
Vade, John Knox, M.D.	. . .	4, Lower Berkeley street
Vincent, George, esq.	. . .	109, Sloane street
Vinen, Edward Hart, esq.	. . .	164, Blackfriars road
Waggett, John, M.D.	. . .	1, Norland square, Notting hill
Wales, Robert, esq.	. . .	21, Stanhope street, Hampstead road
Waite, Charles, esq.	. . .	3, Old Burlington street
Walcott, Robert Bowie, esq.	. . .	8, York street, Portman square
Walker, George A. esq.	. . .	11, St. James's place, St. James's
Wall, John P. esq.	. . .	6, Mount street, Grosvenor square
Wallace, R. esq.	. . .	John's terrace, Hackney road
Wallace, Edward, esq.	. . .	Carshalton
Walsh, Charles R. esq.	. . .	42, Half Moon street, Piccadilly
Ward, Lady . . . .	. . .	Henley Hall, Staffordshire
Ward, Nathaniel, esq.	. . .	7, Wellclose square
Warder, A. W. esq.	. . .	1, Upper York place, Fulham road
Ware, James T. esq.	. . .	51, Russell square
Waterworth, Charles, esq.	. . .	5, Bengal place, New Kent road
Watson, Thomas, M.D.	. . .	16, Henrietta street, Cavendish square
Weber, Frederick, M.D.	. . .	3, Norfolk street, Park lane
Webster, George, esq.	. . .	78, Connaught terrace
Wegg, W. M.D.	. . .	5, Maddox street, Bond street
Wells, Thos. Spencer, esq. R.N.		
Weston, Philip King, esq.	. . .	3, Fitzroy street, Fitzroy square
Westwood, John, esq.	. . .	4, High street, Stepney
Wheatley, Frederick, esq.	. . .	Middlesex Hospital
White, E. Stillingfleet, esq.	. . .	35, Edward square, Kensington
White, George, esq.	. . .	50, Edgware road
Whitfield, R. G. esq.	. . .	<i>for St. Thomas's Hospital Library</i>
Wilks, G. A. F. M.D.	. . .	6, Southwick street, Hyde park
Williams, Allen, M.D.	. . .	11, St. Thomas's street, Southwark
Williams, James, esq.	. . .	11, Dalston terrace, Dalston
Williams, Charles J. B. M.D.	. . .	7, Holles street, Cavendish square
Williams, Joseph, esq.	. . .	University College
Willis, Robert, M.D.	. . .	Barnes, Surrey
Willshire, W. H. M.D.	. . .	2, Cecil street, Strand
Wilson, J. A. M.D.	. . .	28, Dover street
Wilson, Erasmus, esq.	. . .	55, Charlotte street, Fitzroy square



Wilson, Walter, esq.	. . .	15, Henrietta street, Brunswick square
Wilson, Richard, esq.	. . .	7, Maida hill, west, Edgware road
Winstanley, O. S. esq.	. . .	7, Poultry
Woodfall, J. Ward, M.D.	. . .	33, Davies street
Wordsworth, J. C. esq.	. . .	London Hospital
Wright, Edward J. esq.	. . .	Kennington lane
Wylie, John, esq. R.N.	. . .	2, Alderman's walk, Bishopsgate
Yeldam, Stephen, esq.	. . .	9, Stamford street, Blackfriars road
York, James, esq.	. . .	1, Windsor terrace, Maida hill
Young, James Forbes, esq.	. . .	Upper Kennington lane, Vauxhall
Young, Robert, M.D.	. . .	Camberwell green

LONDONDERRY	. . .	Miller, James Ewing, M.D.
LONG SUTTON, <i>Wisbeach</i>	. . .	Ewen, Henry, esq.
LOUGHBOROUGH	. . .	Davies, David, esq.
		Eddowes, J. H. esq.
		Kennedy, James, M.D., Woodhouse
LOWESTOFFE	. Local Sec.	WORTHINGTON, W. C. esq.
		Prentice, John, esq.
		Ray, James, esq.
		Umphelby, Arthur, esq.
LUTTERWORTH	. . .	Buszard, Marston, esq.
LYNN REGIS, <i>Norfolk</i>	. . .	Whiting, Jas. B. esq.
LYTHAM	. . .	Houghton, Edward, esq.
MACCLESFIELD	. Local Sec.	VAUX, JOHN, M.D.
		Newbury, B. esq.
MAIDSTONE	. Local Sec.	TAYLOR, GEORGE, M.D.
		Adams, Richard Dering, esq., Nettlestead
		Allwork, Charles Long, esq.
		Fry, Frederick, esq.
		Joy, Henry William, esq.
		Ottley, John, esq.
		Perrey, Robert, esq., Bridge House, Marden
		Plomley, Francis, M.D.
		Prance, J. C. esq.
		Sanders, Godfrey, esq.
		Sibbald, William, M.D.
MALTON	. Local Sec.	WRIGHT, JOHN JAMES, M.D.
		Bartliff, George, esq.
		Exley, John, M.D.
MANCHESTER	. Local Sec.	REID, HENRY, esq., 9, Oxford street
		Aikenhead, John, M.D., Oxford street
		Ainsworth, R. F. M.D., King street
		Allen, Richard, esq., Royal Infirmary
		Bardsley, James L. M.D., Chatham street
		Barrow, Peter, esq., Clifford street
		Barton, Samuel, esq., 24, Princes street
		Bates, W. M.D., Downing street
		Beevor, William Watson, esq., 43, Gt. George street
		Bell, Charles W. M.D., Ardwick Green
		Bevan, W. esq., Downing street
		Birks, G. V. esq., Rusholme road
		Black, James, M.D., St. Peter's square
		Bowman, David, esq., Chester road, Hulme
		Bradbury, Beckett, esq., Dobcross
		Browne, H. M.D., Bloomsbury
		Brownbill, T. F. esq., Chapel street, Salford
		Crompton, Samuel, esq., Grosvenor street
		Dovington, Thomas, esq. Oxford road



MANCHESTER (*continued*)

- Dumville, A. M.D., Ardwick Green  
 Francis, Jos. T. esq., Bridge street  
 Fletcher, T. S. esq., St. Peter's street  
 Gardom, George, M.D., Salford  
 Gordon, G. esq., Crescent, Salford  
 Greaves, George, esq., Hulme  
 Hardy, Frederick, M.D.  
 Henry, Mitchell, esq., Woodlands  
 Holland, P. H. esq., Grosvenor street  
 Howard, R. B. M.D., George street  
 Hulme, J. D. M.D., Plymouth Grove  
 Hutton, John, esq., Oxford street  
*Infirmary Library*  
 Jackson, James T. esq., Royal Infirmary  
 Jepson, W. M.D., Chapel street, Salford  
 Jordan, Joseph, esq., Bridge street  
 Kerr, H. W. esq., Store street  
*Medical Society*  
 Mellor, Thomas, esq.  
 Middleton, Thomas, esq., Crescent, Salford  
 Noble, Daniel, esq., Piccadilly  
 Nursau, Thomas, esq., Broughton  
 Orred, John, esq.  
 Phillips, Edward, esq., 84, Bloomsbury  
 Radford, Thomas, M.D., King street  
 Ransome, J. A. esq., St. Peter's Green  
 Richmond, Thomas Goodier, esq., Stretford road  
 Salterthwaite, Michael, M.D., Crescent, Salford  
 Smith, William, esq., 42, Moseley street  
 Southam, George, esq., Crescent, Salford  
 Taylor, Samuel, esq., St. Peter's square  
 Thomson, Alexander T. esq., Cheadle  
 Turner, Thomas, esq., Moseley street  
 Walker, John, esq., Piccadilly  
 Watts, T. H. M.D., Piccadilly  
 Webb, Edward, esq., Rusholme road  
 Welsh, W. H. M.D., Eccles  
 Whitehead, James, esq., Oxford road  
 Wilkinson, J. S. M.D., 201, Lincoln terrace, Stretford  
 Wilkinson, M. A. E. M.D., George street  
 Williamson, W. C. esq., Bloomsbury  
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WORCESTER	<i>Local Sec.</i> STREETEN, ROBERT J. N. M.D. Addison, William, esq. Malvern Bancks, Thomas, esq., Stourbridge Carden, Henry, esq. Hastings, Charles, M.D. Hill, Richard, esq. Jones, Walter, esq. Malden, Jonas, M.D. Nash, James, M.D.

WORCESTER ( <i>continued</i> )	Sheppard, James P. esq. Turley, Edward A. esq. White, Wm. Todd, esq., Kempsey Wood, Miles Ashman, esq., Ledbury
WRENBURY, near <i>Namptwich</i> , <i>Cheshire</i> . . . . .	Thomson, David P. M.D.
WREXHAM . . . . .	Griffith, Thomas Taylor, esq. Rowland, William, esq. Williams, Edward, esq., Holt street
WROTHAM, <i>Kent</i> . . . . .	Kent, J. C. I. esq.
WYCOMBE, <i>Bucks</i> . . . . .	Turner, John, esq.
YALDING, near <i>Maidstone</i> . . . . .	Pont, Henry, esq.
YARMOUTH, <i>I. Wight</i> . <i>Loc. Sec.</i>	HOLLIS, CHARLES WISE, M.D.
YORK TOWN, <i>Bagshot, Surrey</i>	Davies, William, esq.
YORK . . . . . <i>Local Sec.</i>	LAYCOCK, THOMAS, M.D. Alderson, Richard R. esq. Allen, Edmund T. esq. Allen, Edward, esq. Allen, James, esq. Barker, Thomas H. esq. Belcombe, H. S. M.D. Brunton, George, esq. Buckle, J. esq., Beadle Dodsworth, Benjamin, esq. Goldie, George, M.D. Hodgson, Horace B. esq., Acomb House Husband, William D. esq. Keyworth, Henry, esq. <i>Library of York County Hospital</i> Matterson, William, jun. esq. Metcalf, J. W. esq., York Asylum Proctor, William, esq., County Hospital Reed, William, esq. Russell, Henry, esq. Scawin, William, esq., Petergate Shann, George, M.D. Simpson, Thomas, M.D. Swineard, Frederick, esq. Thomas, Richard, esq. Thurnam, John, M.D., The Retreat Walker, T. Kaye Lambe, esq. Williams, Caleb, esq.
YOUGHAL, <i>Co. Cork</i> . . . . .	Desmond, John, M.D.

## FOREIGN LIST.

<i>Académie de Médecine</i> . . . . .	Paris
Ames, S. M.D. . . . .	Boston, U. S.
Babington, W. F. esq. . . . .	Bombay
<i>Barbadoes Garrison Medical</i> <i>Society</i> . . . . .	Barbadoes
Baxley, — M.D. . . . .	Baltimore
Beck, J. R. M.D. . . . .	Albany Medical College, U. S.
Bell, John, M.D. . . . .	Philadelphia
Bellingham, Wm. Henry, M.D.	Pisa
Belton, T. M.D. . . . .	German-town, Pennsylvania
Bowen, W. S. esq. . . . .	New York



Boyle, Alexander, M.D.	St. John's, New Brunswick
Brooks, J. W. M.D.	Norwich, U.S.
Burns, Robert, M.D.	Frankford, Pennsylvania
Cadenhead, John, esq.	Madras
Carr, J. T. esq., H.E.I.C.S.	Bombay
Chamberlaine, S. M.D.	Baltimore, Maryland
Chermiside, Sir Robert, M.D.	1, Rue Taitbout, Paris
Cheyne, — M.D.	Bogota, Columbia
Clapp, W. R.	for <i>Pennsylvania Hospital</i> , U. S.
Clark, Alonzo, M.D.	New York
Coffin, — M.D.	Charleston, South Carolina
Congdon, George, M.D.	New York
Curwen, F. M.D.	Philadelphia
Dalton, John Call, M.D.	Lowell, Massachusetts
Dale, William Johnson, M.D.	Boston, U. S.
Darracks, — M.D.	Philadelphia
Derry, T. M. M.D.	Toronto
Dessausuire, — M.D.	Charleston, South Carolina
Dixon, Samuel H. M.D.	Charleston, South Carolina
Dunglison, Robley, M.D. <i>L. Sec.</i>	Philadelphia
Edwards, P. G. M.D.	Charleston, South Carolina
Fisher, John Dix, M.D.	Boston, U. S.
Fox, — M.D.	Philadelphia
Gaillard, — M.D.	Charleston, South Carolina
<i>Georgia Medical Society</i>	Georgia, U. S.
<i>Geneva Medical College</i>	Geneva, New York
Green, H. esq.	12, Clinton place, New York
Green, John, M.D.	Worcester, Massachusetts
Green, John, M.D.	Boston
Green, John, M.D.	Lowell, Massachusetts
Guidice, Vittorio, M.D.	Como
Hale, Enoch, M.D.	Boston, U. S.
Hart, Samuel, sen., esq.	Charleston, South Carolina (2 sets)
Hays, Isaac, M.D.	Philadelphia
Hayward, George, M.D.	Boston, U. S.
Hecker, J. F. C. M.D.	Berlin
Hodge, — M.D.	Philadelphia
Homans, John, M.D.	Boston, U. S.
Hooper, Robert William, M.D.	Boston, U. S.
Hooker, Charles, M.D.	Yale College, New Haven, U. S.
Huxton, R. M. M.D.	Philadelphia
Jackson, — M.D.	Philadelphia
Jeffries, — M.D.	Boston, U. S.
Jervey, — M.D.	Charleston, South Carolina
Johnstone, John M. esq.	Health Office, Georgetown, Demerara
Jones, Samuel, M.D.	Philadelphia
Kalley, — M.D.	Madeira
Kimball, Gilman, M.D.	Lowell, Massachusetts
King, Charles R. M.D.	Philadelphia
King, — M.D.	Toronto
<i>King's College</i>	Toronto
Lajus, — M.D.	Philadelphia
La Roche, — M.D.	Philadelphia
Lecompte, John, esq.	Savannah, Georgia
Leith, Andrew Henderson, esq.	Hon. E. I. C. Service, Bombay
Leslie, John, M.D.	Rio Janeiro
Louis, P. C. A. M.D.	Paris
Macleane, George, M.D.	New York
Macneven, W. H. M.D.	New York
<i>M'Gill's College</i>	Montreal
M'Kenna, W. M.D.	Buenos Ayres

Maillardet, J. W. esq. H.E.I.C.S.	Madras
March, Alden, M.D.	Albany, U. S.
Meigs, — M.D.	Philadelphia
Mendenhall, — M.D.	Cincinnati
Meriot, Francis, M.D.	Boston, U. S.
Mills, Maddison, M.D.	Youngston, U. S.
Mills, Charles S. esq.	Richmond, Virginia
Mitchell, J. K. M.D.	Philadelphia
Morehead, Charles, esq.	Bombay
Moreland, W. Wallace, M.D.	Boston, U. S.
Morris, Casper, M.D.	Easton, Pennsylvania
Moulsire, James, M.D.	Charleston, South Carolina
Mower, T. G. esq.	New York
Mütter, J. M.D.	Philadelphia
M'Vicar, John Augustus, M.D.	New York
<i>New York Hospital</i>	New York
Nicholson, — M.D.	Antigua
Norris, G. W. M.D.	Philadelphia
Oliver, Fytch Edward, M.D.	Boston, U. S.
Packman, Samuel, M.D.	Boston, U. S.
Palmer, — M.D.	New York
Parker, W. M.D.	New York
Parry, E. M.D.	<i>for Lancaster Med. Soc., Philadelphia</i>
Pepper, W. M.D.	Philadelphia
Perry, Marshall Sears, M.D.	Boston, U. S.
Richardson, C. P. M.D.	Charleston, South Carolina
Ross, Archibald Colquhoun, M.D.	Madeira
Ruschenberger, W. S. M.D.	New York
Salter, Richard Henry, M.D.	Boston, U. S.
Sands, A. B. M.D.	New York
Scott, John, M.D.	Colombo, Ceylon
Skinner, N. C. M.D.	Philadelphia
Sondin, W. T. M.D.	Sec. to Swedish Med. Society, Stockholm
Stewardson, — M.D.	Philadelphia
Stillé, Moreton, M.D.	Philadelphia
Stillé, Alfred, M.D.	Philadelphia
<i>Surgeon-General, United States</i>	New York
Taylor, Isaac E. M.D.	New York
Teulan, W. F. esq.	Upper Falls, Toronto
Thayer, W. H. M.D.	Boston, U. S.
Tomes, Robert, M.D.	New York
Tripler, Charles S. esq.	U. S.
Turnbull, L. M.D.	Philadelphia
Tyce, J. C. G. M.D.	Bombay
Wakeman, W. M.D.	New York
Walsh, — M.D.	New York
Washington, James W. M.D.	New York
Watson, John, M.D.	New York
Wiley and Putnam, Messrs.	New York (2 sets)
Wood, G. B. M.D.	Philadelphia
Wood, Stephen, M.D.	New York
Wood, James R. M.D.	New York
Workman, William, esq.	Worcester, Massachusetts.

\* \* Although considerable pains have been taken to render this list as correct as possible, it is feared that some errors will be found. Of these the Secretary will be glad to receive information, in order that they may be corrected in future lists.









